# DEVELOPING A MODEL OF THE VARIOUS TYPES OF RECOGNITION OF PRIOR LEARNING AND THEIR USE IN YOUTH WORK IN THE EUROPEAN UNION

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# Summary

In European policy, the recognition of prior learning (RPL) is seen as a step towards lifelong learning. This is especially related towards informal and non-formal learning (European Commission, 2000; 2001b). In the context of this study RPL refers to the provision of some kind of recognition of the learning that has takeng place in these activities as described by Taylor and Clemans (2000).

Due to rapid economical and technological changes individuals are pushed to acquire higher and more generic skills (Pool & Sewell, 2007). In order to keep up with this increasing pace, the full spectrum of learning (ranging from formal to informal learning) has to be used (Malcolm, Hodkinson, & Colley, 2003). To access this whole range, RPL practices need to be integrated into traditional educational systems. Doing so enables students to obtain partial or full qualifications based on previous experiences (European Commission, 2012a). Within the European Union (EU) two main problems were identified as part of an impact assessment into the state of the validation of non-formal and informal learning: (1) the limited opportunities and underuse of RPL practices and (2) the lack of compatibility and coherence between RPL approaches in the member states of the EU (European Commission, 2012b). In this thesis the first problem will be addressed and a solution will be generated in the form of a model which characterizes the different types of learning outcomes.

The above translates into the following research questions for this study:

1. What causes RPL to be used so infrequently in youth work in the EU?
2. What would the characteristics be of a model describing various types of RPL?

In order to address these questions a literature based Root Conflict Analysis was carried out to identify problems with regard to the underuse of RPL in Europe. This technique is used to identify causes that underlie the given problem. The analysis found four main categories of problems: the lack of a common language, the limited resources available and limited quality of RPL. Ranking these problems resulted in the language problem being selected to generate a solution for. By applying idea generating methodologies (inventive principles and –standards) solutions were developed to solve this problem. Ideas were divided in groups which were ranked using a multi-criteria decision matrix to determine the most appropriate one. The solution that was further developed is a model identifying the different aims why people seek RPL. Such a model can lead to a more targeted approach when it comes to helping individuals in getting their previous learning recognised.

The created model follows a user-based approach and is based on the key players in the RPL process regarding portfolio use as described by Johnson (2002): the person seeking RPL, the process advisor and the assessor. To these, a fourth actor was added: the evaluator (as described by Paddison (2012)). From these four actors the assessor and evaluator were identified as having the greatest impact when it comes to the aim of the recognition. Variations in the way these actors can be represented make up the foundation of the model. These variations are self-assessment and assessment by others in case of the assessor and a limited and broad extent of recognition in case of the evaluator. By placing these in a 2x2 matrix the model was generated. It distinguishes four types of recognition (I to IV): type I recognition is related to the valuing of achievements by the individual (e.g. to foster self-confidence or empowerment of the individual), type II relates to proving one's achievements to a limited number of people (e.g. internal certification), type III to explaining the achievement of the individual to others (e.g. CV translation tools) and type IV to proving one's achievement on a large scale (e.g. credit exemption schemes). These types relate to the aims of recognition as described by Hart, Howieson and Semple (2009).
Variations in the role of assessor can be linked to different types of assessment. Assessment by others has often a more summative nature whereas self-assessment is often more formative. Variations in the extent of the recognition can be linked to different types of motivation of individuals. Recognition with a limited reach is more of intrinsic nature (related to the act itself and the value it

brings to the individual) whereas more extensive reach of the recognition is related to more extrinsic motives (related to factors outside the individual e.g. status).

To increase the practical value of the model an instrument was developed which allows organizations to identify the different types of recognition that are taking place. In this instrument a three-step process is used which organizations can use to identify and classify current strategies and develop new ones related to the development of new tools which enable the recognition of learning outcomes. This process can be aided by a database, which provides examples of recognition of learning outcomes in other organizations. For this purpose a prototype of this database was developed in this project.

The main outcomes of this study include the overview of the problems that limit the adoption of RPL practices in European youth work. A second outcome is the model which gives an overview of the different ways learning outcomes can be recognized. This is valuable as this allows for a targeted development of tools which address one type of recognition.

Further steps in the implementation of the outcomes of this study include the further testing of the instrument in a broad youth work context (testing of the instrument only took place in a Scouting context) and dissemination of the result in both the youth sector in Europe as well as the academic community. Areas for continuing research include the usability of the model in other (non youth work) contexts and preferences in the type of recognition in the various EU countries based on the national situation.

# Table of contents

# 1.    Introduction

## 1.1.    Introduction

We learn in everything we do. As little children we start to explore the world around us and learn new things. Once a certain age is reached our parents bring us to school. Here we are exposed to a structured form of learning which acts as a framework for discovering ideas. Together with our peers we learn the rules of our language, math and how the world works. Learning here is ordered along the lines of subjects. Learning achievements hold some form of formal value, which is expressed through certificates and diplomas.

During the time we spend in formal education we learn things outside school as well. By participating in society we can generate a lot of new knowledge on our own. This generation of knowledge can be done in various ways. For example, we take courses to become trained in subjects that are not in the formal curricula of our schools but spark our interests. By doing so, we generate a lot of knowledge in fields ranging from photography to computer science. Furthermore, we also take part in all kinds of other leisure-based activities in which we learn all kinds of things.

Although there is much learning that takes place outside school, this learning is often regarded as less valuable in comparison to the knowledge and skills gained in formal education. An example of where this learning of young people is taking place is in youth work. All over Europe youth work activities are taking place that are aimed at the development of young people and (to a lesser extend) adults. These are all taking place outside schools. As youth work gives young people the opportunity to develop their skills (Indecon, 2012), recognizing these is important. Especially people with a disadvantaged background can benefit from the combination of the recognition of learning outcomes and youth work. For them this can be the first step to some kind of formal qualification (ICF GHK, 2014a). However, the application of RPL is still scarce in Europe (European Commission, 2012a) and it is difficult to obtain (formal) recognition of this type of learning. This so called recognition of prior learning (RPL) is something that can potentially have great benefits.

In this study the definition of RPL by Taylor & Clemans (2000) is used. These authors defined RPL as: *"the recognition of non-creditentialled or informal learning (that is to say, observable learned outcomes based on experience rather than mere experience or mere outcomes)"* (Taylor & Clemans, 2000). However, the notion of what encompasses RPL differs between writers, researchers and major policy influencing agencies resulting in a lack of consensus and a clear definition (Joosten-Ten Brinke, Sluijsmans, Brand-Gruwel, & Jochems, 2008; Smith L. , 2004). This lack of consensus about the conceptualization of RPL results in the use of a range of definitions (Stenlund, 2010) which range from the RPL as being only related to the rather narrow notion of credit transfer between studies or universities (Pitman, 2009) to a more broader notion of RPL as a form of acknowledgement of previous learned competencies as a result of unstructured informal learning (Knight, 2006).

This study attempts to come up with answers to improve the application of RPL in the setting of European youth work. This will be done by analyzing the root causes behind this problem and proposing a model, which incorporates the various types of recognition of prior learning. Such a model can help to structure the dialogue between policymakers, RPL professionals, youth organizations and other stakeholders in the RPL process. Doing so will allow these groups to develop targeted interventions (through policy, RPL tools or other means) that can help (young) people to advance further in their life.

## 1.2.    Thesis structure

The structure of this thesis consists of five parts divided over nine chapters (excluding this introduction chapter). First an overview will be given of the policy and academic background of the fields of RPL and youth work (Chapter 2). This is aimed at creating a better understanding of how the current

situation came to be and to provide the background against which this study is carried out. This analysis will result in the formulation of the two main research questions of this study. The second section will explain the method that will be used (Chapter 3). The next part (Chapter 4) aims to identify the causes that underpin the limited use of RPL practices in the European Union (EU). It will provide a broad overview of the current situation with regard to RPL practice in Europe. This overview portrays multiple problems that need to be solved to increase the use of RPL. Furthermore, creating this overview helps in the design of an intervention by identifying the issues that have to be taken into account during the design and development stages of the project. In Chapter 5 one of these causes will be selected for further examination. For the selected problem multiple solutions will be generated (Chapter 6). One of these is then selected (Chapter 7) and is further developed (Chapter 8). In this last chapter a justification of the importance of this solution is given and will be based on existing solutions and policy in this field. The fourth part (Chapter 9) will feature the evaluation of the developed solution. This will be done by using various evaluation methods. The last chapter (Chapter 10) summarizes the research project and provides its conclusions. Furthermore, the limitations of this study and areas of future research will be discussed.

This thesis comes with a number of annexes. However, the thesis itself is a stand-alone document that can be read without consulting any of these. The purpose of the annexes is to provide a better insight into the process of the study for those who are interested. Although the annexes can be read independent of this thesis, it is not advised to do so as this might not provide a comprehensive picture of the situation.

## 2. Contextual framework and problem definition

## 2.1. Introduction

This chapter highlights the background in which context the project is operating. Doing so provides a clear picture about the current situation in RPL practices in the EU. It will help in the identification of root causes further in this thesis and helps to better understand the problems in RPL practice. First, this chapter will look into the last one and a half decade of policy development in this area. As this project is working on the crossroads of two policy areas (RPL and youth work) the background of those two fields will be presented. This is done separately for each of the policy fields before the current situation of both fields will be presented. However, this chapter is not meant to provide a complete overview of the history of these domains, but rather to give an introduction to the topic. Second, the research questions this report will address are formulated based on the current situation. Finally, the relevance of these questions is examined by looking at the scientific, societal and practical problems this study tries to address.

## 2.2. RPL policy in the European Union

### 2.2.1. A short policy background in the field of RPL in Europe

Although the first initiatives related to RPL date back to the 1930s in France, it was not before the 80s that RPL became more mainstream (Valk, 2009). On a European level the first developments in this field started to occur in the mid 90s and marked the start of the first of two periods regarding RPL on the EU policy level (Bjørnåvold, 2013).

The first of these periods ran from 1995 to 2012 and the White paper on teaching and learning (European Commission, 1995) is the first document that addressed this topic on EU level. This paper emphasizes the need for a more flexible educational system in order for the EU to become a learning society and aims to pave the way for a broader debate. It would however take five more years before other kinds than formal learning at all levels were considered important (Valk, 2009). This would come in the form of the Memorandum on lifelong learning (European Commission, 2000) where non-formal learning was listed as one of six key priority areas.

In the next five years after the Memorandum the importance of RPL was expressed several times more as can be seen from the Copenhagen Declaration (European Commission, 2002) (for the Vocational Education and Training (VET) sector), the Berlin Communiqué (European Commission, 2003) (in regard to the higher education sector (as part of the Bologna process)) and the common principles regarding identification and validation of non-formal and informal learning (Council of the European Union, 2004). Furthermore, the first version of the European inventory on the validation of non-formal and informal learning was conducted in 2004 and greatly expanded in 2005 (CEDEFOP, 2013a; 2013b). These studies described the state of recognition on a European (2004 version) as well as national level (2005 version). This study has been updated every three years to monitor the progress in this field. The latest version of this study is the 2010 update (this version is currently being updated). The next meeting of the EU ministers of education explicitly named recognition of experiential learning in the context of higher education (also known as the London Communiqué (European Commission, 2007)). This was the first time this was expressed explicitly as earlier documents were rather vague by speaking only about recognition without specifying the nature of the learning (Valk, 2009). However, linking this type of learning to higher education was only possible as a result of the introduction of the European Qualification Framework (EQF) (and the National Qualifications frameworks (NQF)) in 2006/2007 as this provided a framework in which levels of learning could be characterized. A couple of years later, a set of guidelines was developed to help policymakers in this field (CEDEFOP, 2009).

Besides all the policy developments mentioned here a great body of practical knowledge has been

gathered through the various European programs in this field (e.g. the Leonardo Da Vinci, Socrates, YouthInAction, Grundvig and EQUAL programs) (Bjørnåvold, 2013).

Although it would seem from the above that recognition became important in the period from 1995 to 2012, the perceived importance was lacking in many institutions (Reichert & Tauch, 2005; Bjørnåvold, 2013). Furthermore, shared goals were lacking as well resulting in different approaches in the various member states (Crosier, Purser, & Smidt, 2007; Bjørnåvold, 2013). However, the implementation of RPL frameworks and practices has been slow but steady (Bjørnåvold, 2013).

### 2.2.2. The current situation of RPL in Europe

The second period regarding RPL in Europe started in 2012 with the Council recommendation on the validation of non-formal and informal learning (European Commission, 2012c). This document introduces a new coordinating body (the the European Qualification Framework (EQF) Advisory group) which brings together representatives from national authorities and other stakeholders. It aims to align the different approaches of individual member states, create a system for reporting and monitoring and, allows for the continuous development of tools (European Commission, 2013a). This signals a stronger political commitment to this theme than the previous period (1995-2012) (Bjørnåvold, 2013). Furthermore, it identifies the two main problems that exist in the EU regarding RPL today. These are: (1) the limited opportunities and use of RPL practices and (2) the lack of compatibility and coherence between RPL approaches in the member states of the EU (European Commission, 2012c).

## 2.3. Youth work policy in the European Union

### 2.3.1. A short policy background in the field of youth work in Europe

Although the first youth work activities in Europe were initiated at the end of the 19th and the beginning of the 20th century (ICF GHK, 2014a), the first real international collaboration in the field of youth would not take place before the end of the Second World War (Hansen, 2010). Initiatives like the World Federation of Democratic Youth in 1945 were set up in the spirit of co-operation between the allied countries. Despite this, the division of Europe by the Iron Curtain resulted in a division between Eastern and Western organizations in this field. It would take until 1969 before the EU stimulated co-operation between the two parts of Europe. In this year the European Economic Community (EEC) spoke about youth work and youth policies on one of their summits (See the conference summary of the meeting of the heads of state of government (European Economic Communities, 1969)), which resulted in the financial support of youth activities (Hansen, 2010). Besides these activities, the Council of Europe (CoE) has also been (and still is) very active in this field (cf. Hansen (2010)). As the focus of this thesis is the EU these activities will not be discussed here.

Jumping to the year 2000, the launch of the Youth, Socrates and Leonardo Da Vinci programs promised an increased importance in the field of youth policy (Mairesse, 2009). Besides the financial support offered by those programs, a greater political commitment came in the form of the 2001 White Paper on youth in which consensus was reached to develop an European approach on youth issues (which included the recognition of non-formal education within this sector) even though it was not yet officially part of European policy (European Commission, 2001a). This paper provided the foundation upon which youth policy of most of the new member states that joined the EU after 2004 is based (Mairesse, 2009). The political commitment increased even further in 2004 with the signing of the European Youth Pact. In this document youth received specific attention in the field of employment, social inclusion and early school leave for the first time (European Commission, 2005). The launch of the third cycle of programs in 2007 showed a continued commitment as the Youth in Action (YiA) program, aimed at promoting the professional integration and social inclusion of young people was put in place as a follow-up of the Youth program (Mairesse, 2009).

### 2.3.2. The current situation of youth work in Europe

The continued commitment on youth issues on a European level was shown with the declaration of youth work, which is one of the outcomes of the first European youth work convention (European Youth Work Convention, 2010). The declaration calls for a need for further recognition of youth work as an important provider of non-formal and informal learning and the need for a better recognition of the skills learned by volunteers and young people. With regard to the employability of young people, the Irish presidency of the first half of 2013 further strengthened these ideas naming it as one of the key priorities of its presidency (Government of Ireland, 2013). When combined with the increasing importance of youth work through policy and the development of qualification frameworks for youth workers at a national level (ICF GHK, 2014a), youth work is now seen as an important policy area. Furthermore, the shift in youth work from leisure-based to activities focused on the education and the labour market and the professionalization of youth workers (ICF GHK, 2014a) allows for new opportunities for RPL as well. This is beneficial for both youth workers (professional and volunteers) as well as young people.

## 2.4. RPL in youth work in the European Union

In the policy context described in the previous sections the importance of better recognition in informal and non-formal learning settings in youth work is acknowledged. Youth works gives young people the opportunity to develop their skills (Indecon, 2012). Although the current focus on EU level with regard to recognizing these skills is primarily focussed on the combating of youth unemployment, it is believed to be something that has value. Especially people of a disadvantaged background can benefit from the combination of RPL and youth work, as this can be the first step to some kind of formal qualification (ICF GHK, 2014a). In order to do so tools have to be developed that can facilitate the RPL process. It is therefore important to have a common framework of reference. However, a framework that encompasses the various types of RPL does not yet exist.

Although attempts have been made in this direction, models in this field mainly focus on the RPL process rather than providing a classification of the different types and tools used (see for example Duvekot, Schuur & Paulusse (2006), Scholten (2007) or Peeters (2011)). These are mainly based on the model of Whitaker (1989). Another type of model focuses more on various types of RPL. An example of this is the model of Hart et al. (2009). This focuses on different types of RPL but is only limited to the portfolio instrument only. Although this is a popular instrument in RPL (Fejes & Andersson, 2009) it is not the only tool that can be used (Conrad, 2008). Examples of tools other than the portfolio range from self-reflection tools (e.g. the Competence profile tool of KFUM Spejderne (2012) or the Youtpass tool by the EC (Bergstein et al., 2011) to gamified recognition tools (e.g. the UNIQUE learning badges (UNIQUE network, 2013), the award system used by the Youth Achievement Foundation (Graaf, Chapman, Bell, & Dunkerley, 2011) and CV translation tools (e.g. the Valorise toi tool of Scout et Guide de France (2011)).

## 2.5. Problem definition

As described in the previous sections, the underuse and lack of opportunities is considered as one of the main problems regarding RPL in Europe. A model, which classifies the various types of RPL can act as a framework which solves this problem. Such a framework is a step towards a common language in the field of RPL. A model for describing the various types of RPL may create an overview, which can help policy makers, RPL practitioners and youth organizations to become more aware of the various opportunities there are in this field. This can help them to develop better policies and tools geared towards these various types.

The above translates into the following research questions for this study:

1.      What causes RPL to be used so infrequently in youth work in the EU?
2.      What would the characteristics be of a model describing various types of RPL?

The first research question is aimed towards a better understanding of RPL in Europe. This understanding helps to point out key areas to which attention must be paid while designing the model. The second question is focused on the model itself. Given the model is targeted at youth work organizations, the language used in the model (as well as the model itself) should be as simple as possible as these organizations are not used to RPL jargon. Furthermore, (perceived) complexity can be a major barrier for the use of an RPL model (Fejes & Andersson, 2009) resulting in limited use.

## 2.6. Relevance of the study

The relevance of this study is looked at from three perspectives: the scientific, the societal and the practical. For each of the perspectives the problems will be identified which this project aims to solve.

When looking at the scientific relevance of the study, it is mainly related to the modelling of the various types of RPL in youth work. As the lack of a common language in this field is perceived as the main threat to the implementation of life-long learning policies in Europe (European Commission, 2012b), this project aims to provide a solution to this problem. Although models in this field exist, none of these incorporate both multiple tools and various types of RPL (see previous section). However, as the lack of a common language is not the only problem regarding the infrequent use of RPL, a good overview of these problems is required. Therefore the first research question has also scientific relevance. Furthermore, answering this question helps to identify new areas of research aimed at solving the other problems in this field.

When looking at the relevance to society of the study it is also mainly related to the modelling of the different types of RPL in youth work. However, where the scientific perspective is focussed on the development of a common language for RPL, the primary aim here is to help young people to see the value of the things they learn through youth work. This is especially important for those who do not have some form of formal certification where youth work can be a first step in this direction (ICF GHK, 2014a). Furthermore, this model will allow policy makers to identify other types of learning outcomes (and therefore other ways of recognition) besides those related to formal diplomas and increased employability. As policy makers on a European level primarily see recognition as an instrument for one of these categories (see the first part of this chapter) the broader view of this study hopes to create a debate about what recognition is about. Finally, as this study also provides an overview of the problems it will help policy makers and other stakeholders to specifically target those issues.

When looking at the practical relevance of the study, it can be found in providing youth organizations with a framework in which they can develop new tools. The overview of the different ways learning outcomes can be recognized help organizations to find a good mix of the different types of recognition they offer in their programs.

# 3. Methodology

## 3.1. Introduction

Before starting with the analysis of the problems an overview is given of the methods used in this thesis. The overview starts by presenting the various types of instruments used in this study. After this the individual instruments used are separately presented discussed in greater detail. This includes the reasons for choosing a particular instrument, the sample strategy used, selection criteria and number of respondents included in this study.

## 3.2. Research method

The methodology used in this project follows a four-step process, which is carried out sequentially. These phases correspond to the research questions formulated earlier. Phase 1 and 2 correspond to the first research question and phase 3 to the second question. The fourth phase is about the evaluation of the study. In this project qualitative research methods are used. Given the nature of the research questions (what and how questions) this type of research is appropriate. Furthermore, the lack of quantitative data in both the fields of RPL (Werquin, 2010) and youth work research (Dickson, Vigurs, & Newman, 2013), as well as the limited resources available for this project and the relative ease with which valuable qualitative data can be gathered (as a result of existing contacts with important stakeholders and experts) provide additional reasons to use this type of research methodology.

The first phase of this study consists of an analysis of the root conflicts causing the limited use of RPL in the EU. The aim of this phase is to provide a clear overview of these causes. Doing so results in the identification of problems to be addressed by the model. This is done by carrying out a literature review. This method requires few resources while providing a comprehensive overview (Verschuren & Doorewaard, 2007). To structure this process the literature review is combined with a Root Conflict Analysis (RCA+). This tool is part of xTRIZ. TRIZ (теория решения изобретательских задач, teoriya resheniya izobretatelskikh zadatch) is a problem solving and analysis theory consisting of multiple tools aimed at the development of inventive solutions (Barry, Domb, & Slocum, 2014). xTRIZ is a variation of TRIZ developed by TRIZ Master Valeri Souchkov. It includes several additional tools that are not part of the original set of TRIZ tools and is aimed at structuring thought processes and clarifying problems (Souchkov, 2013) (for an explanation of the tools used in this thesis see annex 8). As the problem of the limited use of RPL is complex, a structured approach helps in the identification of these causes. The literature in this stage will be limited to the recognition of non-formal and informal learning. This means literature on the recognition of specific sectors, professions or activities (e.g. youth work, youth workers and volunteering) was not included. Although these fields have similar problems, they are not part of the same topic as the one discussed in this thesis. As the problem with RPL in the EU is not specifically tied to one sector (e.g. youth work) literature from all sectors was considered relevant. No geographical boundaries were set but literature related to recognition in Europe was preferred over literature discussing problems outside this continent.

The second phase aims at ranking the problems found in the first phase and generate solutions to solve the most important problem. Furthermore, the ideas generated will be ranked to find the best solution for the problem. This will be done using several ranking methods (ideality based criteria, comparative ranking and multi-criteria decision matrixes) and inventive standards and –principles. These are abstract solutions strategies which can be applied to problems. The standards and principles were derived from searching for common patterns in inventions. These tools are part of TRIZ and are aimed at the generation of inventive solutions in a structured way (Souchkov, 2013).

The third phase is about the design of a model to describe the various types of RPL and tools that make the model usable for the working field. This phase consists of two sub-steps. These stages all have a specific aim and different tools are used in each stage.

The first step is to review existing models in RPL and to provide a provisional classification for them. Doing so identifies types and characteristics of these models that can help in the design and evaluation of the model to be developed for this project. This is done by conducting a literature review of existing models in RPL. This method is chosen for the same reasons as in phase 1. The second step consists of the design of the model and supporting documentation. This will be done based on the literature found in step one of this phase. Furthermore, the model should fit within the framework of EU policy as described in the previous chapter.

The fourth phase is about evaluation of the research project and its results and consists of four sub-steps. These steps are: the evaluation of the problem analysis, the evaluation of the model, the evaluation of the instrument and the evaluation of the database.
The first step is the evaluation of the problem analysis. For this an expert review will be conducted with EU and RPL experts (for respectively the context analysis and the root conflict analysis). The use of this method allows to quickly estimate the validity of the model using limited resources (Verschuren & Doorewaard, 2007). In these reviews experts will be interviewed using semi-structured interviews. These interviews will be conducted by phone and Skype. Doing so limits the resources needed while allowing for a deeper insight than other tools (e.g. survey research). The experts will be interviewed independently of each other as much as possible to avoid the possibility of groupthink. The interviews will serve as a basis for a write-up of the interview. These write-ups will then be used in the evaluation. The evaluation criterion for this step is the completeness of the analysis. Besides this the use of TRIZ will be evaluated by an expert as well. This will be done by submitting the first eight chapters of this thesis for one of the courses offered at the University of Twente on using TRIZ in a real-live setting. The second step is the evaluation of the model. This will be done by the same methods as the previous steps (expert review and evaluation of the TRIZ methodology). The evaluation criteria of this step are the completeness of the model (covers all types of RPL) and ease of comprehension (lack of RPL specific jargon). Furthermore, conferences on RPL and recognition in youth work will be visited to evaluate the model. The evaluation of the instrument will be done by conducting a try-out with staff members active in youth organizations. This will be done to see if they can work with the instrument. In this project the word instrument will be used when referring to the tool that is developed in this project. The word tool will refer to tools that have been created outside this project. A second test will be conducted in which a number of existing case studies. The case studies will be passed through the instrument to see if it can classify real life situations into the categories. The last step of the evaluation will be the evaluation of the database. This will be done using an expert review. In here, the documentation and the actual database will be submitted as part of a course on database development on the University of Antwerp.

An overview of the various instruments used in the various phases is given in table 1.

Table 1. Instruments used in the various phases of the project

| Phase | Sub-stage | Main activity | Method used |
|-------|-----------|---------------|-------------|
| 1 | | Looking for causes resulting in the limited RPL use | Literature review |
| | | |     General RPL literature |
| | | |     RPL in youth work literature |
| | | | TRIZ |
| | | |     Root conflict analysis |
| 2 | 1 | Ranking contradictions | Ranking methods |
| | | |     Ideality based criteria |
| | | |     Comparative ranking |
| | 2 | Generating ideas | TRIZ |
| | | |     Inventive standards |
| | | |     Inventive principles |
| | 3 | Ranking ideas | Ranking methods |
| | | |     Multi-criteria decision matrix |

| Phase | Sub-stage | Main activity | Method used |
|---|---|---|---|
| Table 1 (continued) | | | |
| 3 | | Model and instrument development | |
| | 1 | Existing models in RPL | Literature review |
| | | | Models in RPL |
| | | | Process models |
| | | | Outcome models |
| | 2 | Model design | User based approach |
| 4 | | Evaluation | |
| | 1 | Problem analysis | |
| | | Context analysis | Expert review |
| | | RCA+ | Expert review |
| | | | TRIZ assignment University of Twente |
| | 2 | Model design | Expert review |
| | | | Visiting conferences in the field of RPL and youth work |
| | 3 | Instrument design | Try-out with youth workers |
| | | | Test with existing cases |
| | 4 | Database design | Database assignment University of Antwerp |

## 3.3. Respondents and sampling

### 3.3.1. Sampling strategy

This study uses different sampling methods for the various steps in the evaluation.  For the evaluation of the context analysis and RCA+ analysis criterion sampling (as described by Onwuegbuzie & Leech (2007)) was used to select the experts for this study. As the purpose of this phase is to ensure the quality of this analysis this sampling strategy is appropriate (Miles & Huberman, 1994). The selection criterion used to select the experts is presented in the next sub section. Experts were contacted by e-mail. For a detailed description of approach methods see annex 6.

For the evaluation of the model design opportunistic sampling (as described by Onwuegbuzie & Leech (2007)) was used. This was done as an opportunity arose during the project to have the model evaluated by the expert group of the youth partnership between the European Commission (EC) and Council of Europe (CoE). This group consists of experts from all of the stakeholders that are relevant for this project making it the ideal group to evaluate the model with. Conferences to take part in were selected using snowball sampling (as described by Onwuegbuzie & Leech (2007)) by asking individuals that are working in youth work on a European level about upcoming events that were interesting for this project.

For the third step opportunistic sampling was used in the case of try-out with youth workers and snowball sampling in the case of the test with case studies (see Onwuegbuzie & Leech (2007) ). In the try-out with youth workers the opportunity arose to test the instrument during a European conference for scout leaders. The opportunity was given to do so as part of one of the workshops of the conference. With regard to the test with the existing case studies the existence of the database was discovered during a conference in which it was presented.

### 3.3.2. Selection criteria

Different selection criteria were used for the various steps in which data was gathered.
Participants in the expert review of the context analysis were selected based on their experience. They had to work for the one of the European institutions in a field related to youth or recognition. This was done as the purpose of this evaluation is to confirm the completeness of this chapter. People working in this sector are likely to have a complete overview of the current situation. This makes them

the right people for this evaluation. The selection of experts for the evaluation of the RCA+ analysis was based on their knowledge of RPL in Europe. This translated in the criterion of having at least five years of experience in the field of RPL. No connection with youth was necessary as this analysis deals with RPL in a broader scope. However, additional experience in this field was considered a benefit. For the evaluation of the model, experts were selected that currently work in the youth sector or in a sector related to it (e.g. government officials dealing with youth issues). Furthermore, experts needed to represent the different stakeholders that are active in this field. This was done to gain feedback from the various actors thus creating better data saturation and wider acceptance (which makes the model easier to implement) . Conferences that were visited were selected based on the agenda of the events. Recognition and youth work were the criteria. A preference was given to events that included both themes on the agenda. However, if recognition was only on the agenda the event was considered as well.

For the evaluation of the instrument youth workers were selected that participated in a conference in October 2013 in Malle, Belgium. This conference was about educational methods in Scouting. The targeted audience consisted of volunteers and professionals in Scouting who work on a national level. The case studies for the other test of this sub step were taken from the Observal-Net database. This database is one the results of the Observal-Net project aimed at identifying good practices regarding the Validation of Non-formal and Informal Learning (VNIL) in Europe. It contains a number of cases, which are considered good practices in this field. Therefore, it should be possible to identify what type of RPL these cases aim at.

An overview of the selection criteria for respondents in the various stages is given in table 2.

Table 2. Selection criteria for the various instruments

| Phase | Sub-stage | Main activity | Selection criteria |
|---|---|---|---|
| 1 | | Looking for causes resulting in limited RPL use | - |
| 2 | 1 | Ranking contradictions | - |
| | 2 | Generating ideas | - |
| | 3 | Ranking ideas | - |
| 3 | | Model and tool development | |
| | 1 | Existing models in RPL | - |
| | 2 | Model design | - |
| 4 | | Evaluation | |
| | 1 | Problem analysis | |
| | | Context analysis | Expert review<br>Working for one of the EU institutions.<br>Working in a field related to youth. |
| | | RCA+ | Expert review<br>5 years experience on the topic of RPL.<br>Working in the field of RPL or youth. |
| | 2 | Model design | Expert review<br>Currently working in the field of RPL and youth on an EU level.<br>Represent different stakeholders in the field of RPL in youth work.<br>Conferences in the field of RPL and youth work<br>Having recognition as the main topic of the conference.<br>Focusing on Europe. |

| Table 2 (continued) | | | |
|---|---|---|---|
| Phase | Sub-stage | Main activity | Selection criteria |
| | 3 | Instrument design | Try-out with youth workers
Working on (national) management level in a youth organization in the field of education & training in Europe.
Test with existing case studies
Part of the Observal-Net database. |
| | 4 | Database design | - |

### 3.3.3. Sample size

Different sample sizes are taken for the different evaluations. For the evaluation of the context analysis one expert will review the work. Although this limits the acceptance of the analysis, its aim is to present the main ideas and to review whether or not major policies were omitted in writing this section. Four experts in this field reviewed the problem analysis. Again this limits acceptance. However, the seniority of the experts (as described in table 2) hopes to compensate this fact.

The sample size expert review of the model design will be eight. Although this number is low according to Creswell (2002) for grounded theory research (at least 15-20 people are suggested), the expert groups consists of the major stakeholders in the debate in RPL in youth work. Furthermore, this size is big enough to let everyone have their say and manageable to moderate (Morgan, 1997).

In the evaluation of instruments design three groups of ten to fifteen participants were consulted. The number of groups is usually enough to reach data saturation (Morgan, 1997). Although the number of participants per group is relatively high when it comes to the moderation of the discussion, this problem was overcome by having two moderators instead of one. The number of case studies evaluated was fifty. Given the aim of this evaluation (see if the questions in the instrument are usable to specify the various types of RPL), this number is sufficient (Morse, 1994).

### 3.3.4. Instrumentation

Guidance notes for both the expert reviews and the tests as well as templates for the write-ups have been developed. These documents can be found in annex 6. Guidance notes and templates were drafted based on similar documents used by ICF GHK for similar purposes. ICF GHK is a multinational consultancy firm with an office in Brussels (ICF Consulting Limited, 2013) where I did an traineeship from February 2013 till June 2013.

## 3.4. Data analysis

The analysis of the quantitative data was carried out using specialized software (NVivo, version 10). This resulted in a quicker and more systematic approach compared to when non-specialist software (e.g. document processing software) would have been used. In this software all the data gathered in this project (expert reviews and experiments) was coded using a predetermined set of codes. Codes were based on the characteristics of the various categories of the model, the types of RPL, RPL instruments used and the lack of RPL jargon used in the model. Different sets of codes were used for the expert review and the case studies. Lists of codes are displayed in annex 7.

## 3.5. Procedure

Evalidation of the analyses, the model and the tools was done using the instruments described in the previous sections. The results of these evaluations were captured in write-ups of the individual events. These write-ups are between two to three pages A4 each and follow a template (see annex 5 for the write-ups). Data gathered in the here was analyzed. This was done using the coding process as

described in the previous section. Once coded, the different codes were analyzed using descriptive methods. As part of this process tables and other visual aids (e.g. illustrations and maps) will be created to help with the interpretation of the data. Furthermore, these will used to support the clarity of the text in the final report.

# 4. The limited use of RPL in the EU

## 4.1. Introduction

This chapter aims to identify the reasons that cause RPL to be used infrequently in the EU. These root causes can then be resolved, which in turn solves the main problem. For this a combination of Root Conflict Analysis (RCA) and a literature review will be used (for an explanation of Root Conflict Analysis see annex 8 or chapter 2 of Souchkov (2013)). The first part of the chapter determines the starting point of the analysis after which separate perspectives of looking at the problem are discussed. These perspectives are then combined to give a clear overview of what causes the limited use of RPL in Europe.

## 4.2. Problems with RPL in Europe

As a starting point of the analysis the limited use of RPL in the EU is taken. This is considered to be one of two main problems in RPL in Europe (European Commission, 2012b). In RCA this problem is formulated as displayed in figure 1.



Figure 1. The main problem in RPL in Europe

Based on the problem further analysis was carried out looking for causes that contribute to this problem. This was done using a literature review of RPL. This review resulted in a number of causes that were grouped together using three different perspectives. These are the linguistic perspective, the quality perspective and the resource perspective. These groups are first discussed separately before they are combined in the RCA+ diagram.

### 4.2.1. The linguistic perspective

The first perspective discussed is a linguistic one. Although RPL is considered to be important at the EU policy level, there is no set of definitions of RPL in this field (Werquin, 2010). Although the valuing of things learned in life is common all over the world (Hargreaves, 2006) there seems no consensus between writers, researchers and major policy influencing agencies regarding a clear definition of RPL (Joosten-Ten Brinke et al., 2008). This is further complicated by discussions about what encompasses different kinds of learning (formal, non-formal and informal) in adult education (Conrad, 2008). Although using different concepts and terminology, all approaches agree that RPL is related to the increasing of awareness by both individuals and society of learning outcomes (Fejes & Andersson, 2009). Another interesting point of similarity between the definitions used is that, they all focus on finding ways to document previous undocumented learning (Taylor & Clemans, 2000). As noted in the introduction of this paper, here the definition of Taylor & Clemans (2000) is used which defines RPL as "*the recognition of non-credentialled or informal learning (that is to say, observable learned outcomes based on experience rather than mere experience or mere outcomes)*" (Taylor & Clemans, 2000) since it covers the aspects (of informal learning and awareness) regarding RPL most scholars agree on and does not specify the aim (e.g. the increase of employability of individuals) of the recognition.

Moreover, this 'language problem' is not limited to the EU but appears to be a problem on a more global level (e.g. see Conrad (2008) or Smith (2004) for examples of this problem outside of the EU). In Europe, the lack of a common language was identified as one of the main challenges for a wider implementation of RPL practices as well as the acceptance by the general public (Hawley, Souto Otero, & Duchemin, 2010). Furthermore, a lack of common language makes it hard to define a clear purpose as to what RPL can be used for. As this problem exists within the field of RPL on a global

scale it is directly related to the limited use of RPL. In the RCA+ diagram this results in the element displayed in figure 2 to be added to the RCA+ diagram.



Figure 2. Main problem presented by the linguistic perspective

Within the EU this lack of common RPL language seems to be caused by two elements: the differences between member states and the lack in coherence between RPL definitions.

The first element refers to the many differences between member states (Konrad, 2010). As discussed earlier (section 2.2), approaches vary greatly within the EU member states when it comes to RPL. Even though the number of clusters of similar approaches has been reduced in Europe from five (Bjørnåvold, 2000) to two (Hawley et al., 2010), RPL practices still greatly differ between countries. RPL approaches either predominantly focus on design and management of initiatives on national or local level. Furthermore, differences can be found in the degree of implementation of RPL. This differs greatly between countries and even inside various sectors in the same country (Hawley et al., 2010). However, these differences between member states with regard to the approach taken also have their benefits. The major benefit of this diversity is the ability to cater for the specific needs of that country and sector. This is positive as this makes RPL easier to apply in the (educational) frameworks of the countries. Although this is not necessary beneficial from an EU perspective, it is looking from the viewpoint of the individual EU citizens. This results in a contradiction. In the RCA+ diagram as presented in figure 3.
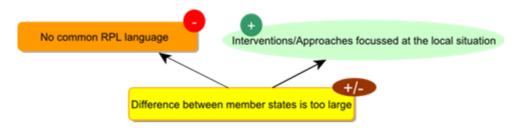


Figure 3. Contradiction of the differences between member states in the field of RPL

The second underlying cause is the lack of coherence between RPL definitions. There seems to be little or no consensus between writers, researchers and major policy influencing agencies regarding a clear definition of RPL (Joosten-Ten Brinke et al., 2008; Smith L. , 2004). This results in the use definitions (Stenlund, 2010) ranging from RPL as only relating to the rather narrow notion of credit transfer between studies or universities (Pitman, 2009) to a broader one where RPL is seen as a form of acknowledgement of previous learned competencies gained through unstructured informal learning (Knight, 2006). Different concepts are used to define the same thing and tend to differ between countries or regions. Terms more associated with recognition of formal learning like "credit transfer" and "qualification recognition" are often confused with RPL (National Qualifications Authority of Ireland, 2011). An example of this is the concept of prior learning assessment and recognition (PLAR). Although seemingly similar to RPL, this concept includes the recognition of both the formal and informal learning whereas RPL has a tendency to include only non-formal and informal learning (Conrad, 2008). Another concept used frequently in this field is prior learning assessment and recognition (PLAR). However, this is used as a concept to include the recognition of both the formal and informal learning whereas most RPL definitions tend to include only informal learning (Conrad,

2008). Besides this, the term Validation of non-formal and informal learning (VNIL) is also often used in discussions on the European level (e.g. see the Council Recommendation on this topic of 2012 (European Commission, 2012c)). Although this concept specifically focuses on non-formal and informal learning, its focus is primarily on the formal recognition by education institutions (and to a lesser extent on the recognition by employers) as a way to increase employability.

Even in European policy different things are meant with seemingly similar definitions. For example 'recognition of non-formal and informal learning' as used in Europe's 2020 strategy is not the same as the term 'recognition of prior learning' as used in the supporting documentation of the Bologna treaty as this also incorporates formal education (Hawley et al., 2010). In the RCA+ diagram this lack of coherence will be displayed as presented in figure 4.

Too little coherence between RPL definitions

Figure 4. Second element in the linguistic perspective

Even though the lack of a common definition is not beneficial for RPL practices, it is caused by a more fundamental problem. This is the lack of consensus of what RPL actually is (Hargreaves, 2006). When talking about RPL different things are meant. As with the definitions, this ranges from formal qualification to less formal approaches aimed at personal development.

This distinction is described by Birenbaum (1996) in the context of portfolio use as 'grading' versus 'inquiry reading'. This lack of consensus is obviously not beneficial for the definition of RPL and therefore it is mentioned separately in the RCA+ diagram. This is presented in figure 5.
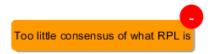
Too little consensus of what RPL is

Figure 5. Lack of consensus about what RPL is

This negative effect, as seen above, seems to be caused by the existence of a range of RPL types. The existence of multiple forms of RPL has resulted in a dual focus within RPL in Europe as discussed earlier (section 2.2.2). Looking at tools that have been developed to facilitate RPL further exemplifies this. For example in the United Kingdom an organization called Youth Achievement Foundations (YAF) helps disadvantaged youth to get both formal and other types of recognition of their previous knowledge (Graaf et al., 2011). On the other side there is the example of the French Scouting association Scout et Guide de France (SGF) who developed the "Valorise toi" tool. This tool helps scout leaders to describe what they learn through scouting and guiding in order to put this on their CV (Scout et Guide de France, 2011). However the existence of various types of RPL also has benefits. As with the first element, this ability to choose allows for solutions to be focused on the local situation. However, there is a difference with the first element. Here, the local situation is not related to the national situation (as is the case in the first element), but rather with the personal values of the individual receiving recognition. However, this is only the case as long as students are not forced to undergo the RPL process (e.g. as part of some formal program or external requirement) in which case this value is limited (Deller, 2003). In the RCA+ diagram the contradiction is presented in figure 6.
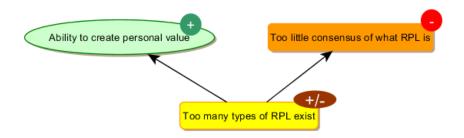
Figure 6. Contradiction related to the existence of various RPL types

These two elements are connected to the main cause of this perspective by a so-called "AND" relationship. This means that either one of the elements has to be solved in order to overcome the main problem presented in this perspective. To solve the problem of lack of a common RPL language approaches have to become more similar or definitions have become clearer. In the first case similar approaches towards RPL will result in a better common understanding of what everyone is doing in this field. This consensus allows for the existence of multiple definitions as it is agreed what the methodology to be used is and what the final outcomes should be. On the other hand, solving the second problem will create a foundation for a common RPL language as well clarifying what is meant by RPL (and its different forms). The use of a common definition allows for multiple approaches towards RPL by clarifying the current situation allowing for a better understanding of the approaches of others. This results in the overview of the linguistic perspective as presented in figure 7.
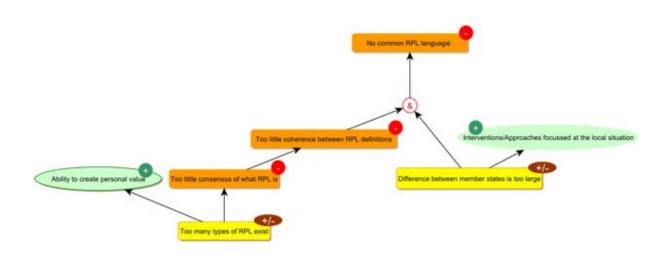


Figure 7. Overview of the linguistic perspective

### 4.2.2.   The quality perspective

The second perspective discussed is that of quality. Concerns exist about the quality of RPL (Joosten-Ten Brinke et al., 2008; Stenlund, 2010). These concerns regarding the quality can be divided into two groups. These are related to the perceived and actual quality of RPL and RPL procedures. In the RCA+ diagram the main problem of this perspective is presented in figure 8.
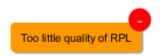


Figure 8. The limited quality of RPL

In society, RPL is mainly perceived negatively (Hawley et al., 2010). For example, in Greece RPL of non-formal and informal learning is looked down upon as something that is less valuable than a similar qualification obtained through formal education (Hawley et al., 2010). Even in Finland, which has a well-developed RPL system, students prefer to go through formal education rather than a validation process (Hawley et al., 2010). Also, other groups than students share the conviction that non-formal and informal learning are less valuable. For example, educational providers in northern Europe expressed being anxious about the implementation of RPL frameworks for non-formal and informal learning as a result of the limited perceived value of these types of learning (Nordiskt Nätverk för Vuxnas Lärande, 2010).

Changing these believes is hard and, given the limitations of this study and the extensive nature of this problem, is not considered possible within this study. Therefore, it is considered as being an unchangeable negative effect. This does not mean the problem cannot be solved. It rather is outsidethe scope of the project. In the RCA+ diagram this is presented in figure 9.



Figure 9. Undervaluing of non-formal and informal learning

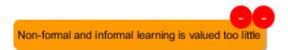Problems relating to the actual quality of RPL are mainly related to the validity aspect. In order to be considered trustworthy by RPL providers, empirical evidence must be present to ensure validity of the methods used. This lack of empirical evidence is caused by a limited number of empirical studies (Joosten-Ten Brinke et al., 2008; Stenlund, 2010). This is in contrast to the theoretical evidence that is available for most procedures regarding construct validity, reliability and perceived trustworthiness (Stenlund, 2010). This lack of quality assurance is something negative and makes educational institutions limit the amount of RPL they allow in a curriculum (Pitman, 2009). Another downside of this lack of evidence is the preference of educational institutions to only recognize learning of students who can present some form of documentation. Since RPL also intends to give credit to students who learned in an informal environment, this can be considered to be a negative effect and be a potential barrier for these students (Hargreaves, 2006; Pitman, 2009). As this study does not aim to create empirical evidence for specific tools but rather focuses on the mapping of the various types of RPL this is considered to be an unchangeable negative effect. Again, this is the result of it being outside the scope of the project. This is displayed in figure 10.
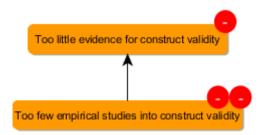


Figure 10. Causes relating to the lack of quality in RPL

The two presented problems causing the main problem in this perspective are connected with an "IF" relationship as they both address different types of quality (actual and perceived). If the problems relating to the actual problems were solved (e.g. by doing more research into the empirical validity evidence), this would affect the perceived quality only marginally. In this case effort still needs to be done to reduce the suspicion regarding the lack of perceived quality of RPL. On the other hand, if RPL became fully accepted the actual quality of RPL tools still would remain problematic. This is especially true on the more formal end of the RPL spectrum where the quality of tools is indirectly related to the

reputation of an RPL provider. As a result of the part of the RCA+ diagram relating to this perspective looks as follows (figure 11).
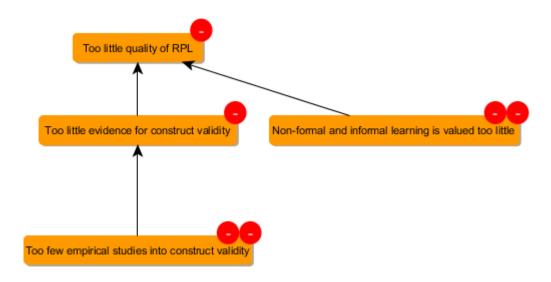


Figure 11. Overview of the quality perspective

### 4.2.3. The resources perspective

The third perspective that causes RPL use to be limited is the lack of resources available. The high costs related to this method of learning are a significant disadvantage (Fejes & Andersson, 2009; Smith L. , 2004). These costs, both related to time and money, appear to be a major disincentive for both students and RPL providers (Smith L. , 2004) and seems to be caused by the complex nature of RPL (Gallacher & Feutrie, 2003; Knight, 2006; Taylor & Clemans, 2000) and a need for extensive documentation (Gallacher & Feutrie, 2003; Smith L. , 2004). In the RCA+ diagram these two causes ate connected with an "IF" relationship. Even though simplifying RPL would decrease the need for extensive documentation this does not necessarily work the other way around. As a result both negative effects need to be solved. In the RCA+ this is displayed in figure 12.
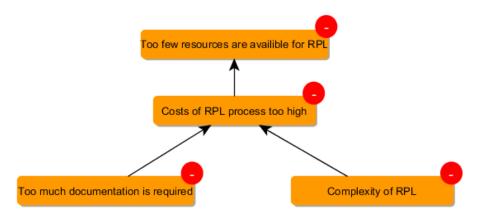


Figure 12. Causes resulting in the cost of RPL being too high

First, the need for extensive documentation is looked at. This burden seems to be caused due to the high (perceived) standards by RPL providers for audits (Gallacher & Feutrie, 2003; Smith L. , 2004). Educational providers strongly dislike these requirements related to the administration of this process (Smith L. , 2004). Although perceived as being negative, high standards have positive benefits as well. High standards can result in high quality of the procedure and tools used. This is especially important

24

for individuals and institutions that seek recognition with formal educational institutions. In the RCA+ diagram this is displayed in figure 13.
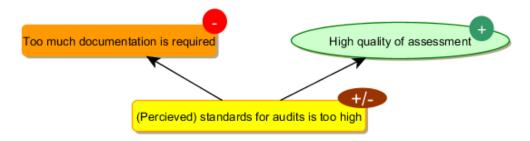


Figure 13. Contradiction between required documentations and quality of assessment

The complexity of RPL in this situation seems to be caused by the fact that the problem is looked at EU wide. Looking at RPL from an individual level it often becomes simpler. As the starting point of this analysis is the EU level, it is considered to be an unchangeable negative effect in this context.

This leads to the conclusion of this perspective. A complete overview of this part of the RCA+ diagram is displayed in figure 14.
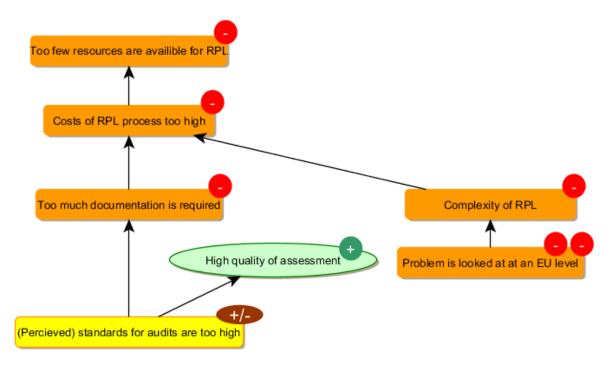


Figure 14. Overview of the resource perspective

### 4.2.4. An overview of all of the perspectives

Now that the varying lines of thought have been determined they can be combined to create an overview of the whole problem. However, before this is possible the type of relation between the main problem (RPL is used too little) and the four perspectives has to be determined. The type of relation depends on whether or not solving one problem makes another problem obsolete. It is believed this is not the case as the perspectives focus on different aspects of the problem. Therefore, the various perspectives are connected with "IF" type relations. For example the creation of a common RPL language has little to no influence on the amount of resources available for RPL. An overview of the main problem and the relation with the four perspectives is presented in figure 15.
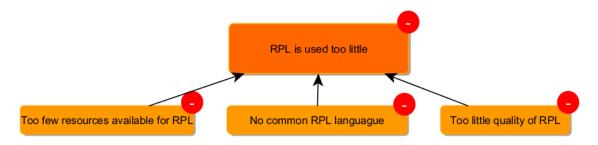
Figure 15. Relation between the main problem and the four perspectives

This completes the RCA+ diagram related to the causes underpinning the little use of RPL. A complete image of the whole diagram is presented in annex 2.

## 4.3.   Conclusion

This chapter discusses the underlying problems related to the limited use of RPL in the EU. To solve this problem a root conflict analysis was carried out based on literature and a RCA+ diagram was created to display the relations between the problems. Based on this diagram it can be concluded that the main problems within the field are related to the lack of a common language, the limited quality of RPL and the limited resources available. Contradictions that were found are related to the many types of RPL that exist, differences between the EU member states when it comes to approaching RPL and the validity requirements of RPL tools. In the following chapter these contradictions will be ranked to assess which contradiction can be solved best.

# 5. Ranking the contradictions

## 5.1. Introduction

In this chapter the contradictions found in the previous chapter will be ranked according to their importance. This will be done to determine which contradiction can be solved best. For this purpose ideality based criteria (for elements in an "AND" relationship) and comparative ranking (for elements in an "IF" relationship) will be used. These evaluation methods are used in xTRIZ alongside the Root Conflict Analysis (Souchkov, 2013).

## 5.2. Order of comparison

Before carrying out the actual comparison, the order in which the comparisons have to take place has to be determined. This is necessary as the contradictions appear on various levels in the RCA+ diagram and are connected with each order though different relationships. Determining the ranking order will be done based on a simplified structure of the RCA+ diagram. In this structure the relations between the contradictions is displayed with all the negative effects taken out (except for the main problem). This is shown in figure 16. The main purpose of this figure is to present the structure of the diagram with regard to the contradiction and the relationships between them rather than the actual content of these contradictions. The content of the contradictions is presented in table 3.
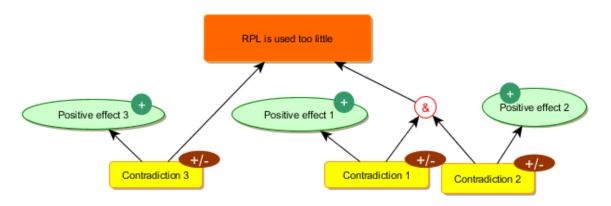


Figure 16. Simplified structure of the RCA+ diagram

The three contradictions that were found in the previous chapter are visible in the overview. Two of them (contradiction 1 and 2) are connected through an "AND" relationship. Together they are connected with the other contradiction (number 3) by means of an "IF" relationship. Based on this, the two contradictions in the "AND" relationship have to be ranked first (cf. annex 8). After this, the contradiction that is considered to be most appropriate to solve will be ranked alongside the other contradiction (number 3). The causes, positive effects and negative effects for all three contradictions are displayed in table 3.

Table 3. Contradictions and their effects

| Contradiction number | Cause | Type of effect | |
| --- | --- | --- | --- |
| | | Positive | Negative |
| 1 | Too many types of RPL exist | Ability to create personal value | Too little consensus of what RPL is |
| 2 | Difference between member states is too great | Interventions/ Approaches are focused on the national situation | No common RPL language |
| 3 | Validity requirements are too high | High validity of assessment | Too much documentation is required |

## 5.3. Ranking using ideality based criteria

The contradictions that are connected through the "AND" relationship will be ranked first using the ideality based criteria method. This method is used when problems or solutions are dependent of each other, causally or complexly related. This dependence does not allow for a direct comparison as it is difficult to predict which contradiction is the most important. However, heuristic criteria (called the ideality based criteria) can be used to estimate the expected degree of ideality. Solutions that allow for greater ideality are better than those that allow for a lesser degree of ideality. Four of these heuristic criteria are identified in xTRIZ: (1) involving a minimal number of components (solutions involving less components are better), (2) focussing on system elements (solutions that do not require changes to the super system are better), (3) easy to change (solutions that only involve changes that are easily made are better) and (4) alignment with the overall strategy of the problem owner (solutions that are better aligned are better). For each of these heuristics comparative ranking is carried out and the results are added together. The contradiction with the highest score is solved first (cf. annex 8). Problems are solved from the perspective of the problem owner (Souchkov, 2013). The problem owner in this case is twofold. On the one hand this is the European Commission which aims to improve the use of RPL in Europe. More specifically it is Directorate General Education and Culture (DG EAC) (the Directorate General responsible for youth work affairs within the European Commission (European Commission, 2013b)), the Directorate General Employment, social affairs and inclusion (DG EMPL) (the Directorate General responsible for responsible for policy in the field of employment, social affairs and inclusion (European Commission, n.d.)). On the other hand individuals seeking RPL are also considered to be problem owners as they as they are the ones who experience the negative effect as well. Furthermore, they fulfil the role of customer in this problem.

### 5.3.1. Involvement of a minimal number of elements

The first criterion handles about the number of elements that are involved in the contradiction. The involvement of fewer elements is favourable here as this means fewer components have to be modified to overcome the problem (Souchkov, 2013).

In comparing the contradictions one and two it can be argued the first involves the least components. Whereas the components of contradiction number two consist of the approaches of the various member states and institutions involved in the implementation of RPL systems, the elements involved in contradiction one are more limited. The problem described in contradiction one only affects the various tools used and the academic debate as on the grassroots level interest in defining the different types of RPL is extremely low. Therefore contradiction one receives a score of one and contradiction two a score of minus one. This is displayed in table 4.

Table 4. Ranking scores related to the use of the minimal number of elements

| Contradiction |
| --- |

| Contradiction | 1 | 2 |
|---|---|---|
| 1 | X | 1 |
| 2 | -1 | X |

### 5.3.2. Focus on system elements

The second criterion is about the degree of involvement of system components. The involvement of system components, as opposed to components of the super system (the super system consists of everything that is outside the system. For example a road is part of the super system of the system 'car'), is considered to be favourable as this means it is more likely to find solutions locally (Souchkov, 2013).

In the comparison between contradictions one and two it can be argued the second involves more local components. Whereas the first contradiction is a significant influencer for the super system this is much less the case in the second one. An increase or decrease in the number of RPL types has an impact on the debate about the definitions relating RPL. However, the different approaches of member states only influence the approaches of other countries in a limited way. Therefore, contradiction one receives a score of minus one and contradiction two a score of one. This is displayed in table 5.

Table 5. Ranking scores related to the focus on system elements

| | Contradiction | |
|---|---|---|
| Contradiction | 1 | 2 |
| 1 | X | -1 |
| 2 | 1 | X |

### 5.3.3. Ease of change

The third criterion handles about the ease with which the components of the system can be changed. The ease with which changes can be made is considered to be favourable as this has a positive impact on the implementation of the solutions (Souchkov, 2013).

In the comparison between contradiction one and two it can be argued the first contradiction consist of easier changeable components. Where the second contradiction has strong links with national and European policies (e.g. EVC in the Netherlands (national level) and the ECVET en ECTS credit systems (European level)), the first one is limited to the rules regarding the use of the various tools. In order to change the components of the second contradiction the actors in the policy making process have to be involved. This usually takes quite a bit of time as current approaches are often part of long-term strategies. On the other hand, the tools and the rules governing their use can be changed with relative ease. Therefore, contradiction one receives a score of one and contradiction two a score of minus one. This is displayed in table 6.

Table 6. Ranking scores related to the ease of change

| | Contradiction | |
|---|---|---|
| Contradiction | 1 | 2 |
| 1 | X | 1 |
| 2 | -1 | X |

### 5.3.4. Alignment with the strategy of the problem owner

The fourth criterion handles about the alignment ofthe solution has with the strategy of the problem owner. Contradictions that align better with the problem owners' strategy than those which are less aligned are considered to be better solutions (Souchkov, 2013). As discussed in the beginning of the chapter the problem owners are the EC as well as individuals seeking recognition.

In the comparison between contradiction one and two, it can be argued no contradiction is aligned the most with the problem owners' strategy. This is the case as contradiction one favours the individual

seeking recognition (as a good single definition makes RPL easier to understand) and contradiction number two favours the EC (as a similarity in RPL approaches eases policy making). Therefore both contradictions receive a score of zero. This is displayed in table 7.

Table 7. Ranking scores related to the alignment with the strategy of the problem owner

|  | Contradiction | |
| --- | --- | --- |
| Contradiction | 1 | 2 |
| 1 | X | 0 |
| 2 | 0 | X |

### 5.3.5. Calculating the scores

After the individual scores on the four criteria the final scores can be calculated. This is done by adding the four sub-scores. The result of this is presented in table 8.

Table 8. Final scores of the ideality based criteria method

|  | Contradiction number | |
| --- | --- | --- |
| Ideality based criteria | 1 | 2 |
| Minimal elements | 1 | -1 |
| Focus on system elements | -1 | 1 |
| Ease of change | 1 | -1 |
| Strategy alignment | 0 | 0 |
| Totals | 1 | -1 |

With a score of one, contradiction number one is considered to be the most appropriate to solve. Although contradiction number two focuses more on system elements and contradictions are tied on the point of strategy alignment, this is not enough to choose this contradiction in favour of contradiction one as the total score of contradiction two is lower (than that of contradiction one).

## 5.4. Ranking using comparative ranking

The remaining contradictions (one and three) are linked by an "IF" type relationship. To rank these contradictions comparative ranking can be used to determine the contradiction that can be solved best. Here, contradictions are compared in pairs to each other based on the degree to which they contribute to the main problem (Souchkov, 2013). The problem in the comparison that contribute most to the general problem receives a score of one and the problem that contributes less a score of minus one. In case both problems contribute evenly to the problem both problems receive a score of zero.

As there are only two contradictions left, a pair wise comparison will be done between these two (contradictions 1 and 3). It can be argued contradiction number one contributes more to the main problem than contradiction number three. Although the resources needed for RPL are under pressure as a result of the need for high validity of RPL tools consensus is essential about what it is those tools are measuring. This requires a common language. Therefore, solving the problem of a common language is more important and can help to partly overcome contradiction number three. As a result of this comparison, contradiction one scores one point and contradiction three scores minus one.

As no other pair wise comparisons have to take place (there are no other contradictions) this is also the final score. This is presented in table 9.

Table 9. Results of the comparative ranking method

|  | Contradiction | |
| --- | --- | --- |
| Contradiction | 1 | 3 |
| 1 | X | -1 |
| 3 | 1 | X |
| Totals | 1 | -1 |

With a score of one, contradiction one has the highest score and is selected as the contradiction that can be solved best. Contradiction three comes second with a score of minus one.

## 5.5. Conclusion

In this chapter the contradictions that were found using the RCA+ analysis were ranked. This was done to determine which contradiction to solve as part of this project. Using the ideality criteria method and comparative ranking the lack a common language was found as the contradiction to solve first. In the next chapter solutions will be generated to overcome this contradiction. This will be done using inventive standards and –principles (abstract solutions which can be used to solve problems).

# 6.    Generation of solutions

## 6.1.    Introduction

In this chapter solutions will be generated for the contradiction that is considered the most important to be solved. The contradiction was selected in the previous chapter. Developing the solutions will be done using inventive standards and –principles (for more on these methods see annex 8 or Souchkov (2013)). These methods are part of TRIZ and can be used to generate inventive solutions by looking at common patters of innovations.

## 6.2.    Taking a closer look at the chosen contradiction

Before starting to generate ideas, a closer look is given to the selected contradiction. This is done to create a clear idea of the solutions that are looked for. In order to do so the system and its components, are described in the two different states they can be in. This allows for the formulation of the ideal result which will be the basis of the idea generating process.

First, the system will be described. In here the systems' type and elements will be described. The type of the system is considered a social one as RPL requires interactions between people to take place before it occurs (recognition requires most of the time interaction between people. Either someone else does the actual recognition or someone else helps the individual to recognize his/her own learning outcomes). Furthermore, it fits the criteria of a social problem as described by Rubington & Weinberg (2011). These authors define a social problem as: "*an alleged situation that is incompatible with the values of a significant number of people who agree that action is needed to alter the situation*" (Rubington & Weinberg, 2011, p. 3).

The elements that make up the system can be derived from the contradiction that was chosen in the previous chapter (contradiction 1). In here, the many definitions of RPL are regarded as negative. On an abstract level, these definitions can be seen as a choice for the individual seeking RPL (as he/she has to decide what type of RPL to pursue). The second element of the contradiction is the ability to create personal value through RPL. The third element of the contradiction is the little consensus about RPL. To create consensus there is a need for a wide acceptance of what RPL is.

Using the description of the system, the elements it is made up of and using the formulation for system descriptions used in TRIZ, the chosen problem and it elements can be described as follows:

*The social system for providing a common understanding of RPL includes choice, personal value and wide acceptance.*

Based on this description, two technical contradictions (TCs) can be formulated by looking at extreme case scenarios. Technical contradictions describe contradictions that appear when one of the elements of the system is varied. As the cause in the original contradiction (contradiction one) was 'the many definitions of RPL', 'choice' was selected as the variable. By varying this element the other elements are influenced. This influence is shown in the technical contradictions.

*Technical contradiction 1 is: if there is a lot of choice, personal value of RPL is high, but the language used is confusing.*

*Technical contradiction 2 is: If there is little choice, personal value of RPL is low, but the language used is clear.*

Based on the technical contradictions it is possible to formulate an ideal result. This combines the positive effects of both technical contradictions. In TRIZ this so call 'Ideal Final Result' uses a specific formulation. This result is formulated as follows:

*It is necessary to create high personal value and a lot of choices (of RPL) while maintaining a clear language by introducing minimal changes in the system.*

## 6.3. Using inventive standards to generate solution

Based on the analysis done in the previous sub section, solutions can be generated using inventive standards (cf. annex 8 or Souchkov (2013)). The standards are a set of seventy-six abstract standards (divided into various groups) that can be used to solve problems. These can be used to overcome generic problems.

### 6.3.1. Defining the substance field

Before ideas can be generated, a substance field model hast to be defined. Substance-field models (cf annex 8 or Souchkov (2013)) are representations of interactions between elements used in TRIZ. This shows the interaction (between elements), their characteristics (positive, negative or insufficient) and the context in which they operate. It visualizes the interaction and is used in combination with the inventive standards.
A substance field model consists of four elements: the first element of the interaction, the second element of the interaction, the context (field) in which the interaction takes place (e.g. mechanical, electromagnetic, legal or social) and the interaction itself.

The aim of the project is to increase the personal value of RPL without creating too many choices for the individual seeking RPL and maintaining a clear language (see previous section). As the second technical contradiction shows, in case choice is limited language is clear. This is a positive interaction. However, personal value is low. In the ideal result this is high. Therefore in TC2, the relation between choice and personal value is insufficient (compared to the ideal final result) and has to be improved. A representation of this relationship and the field in which it operates can be made in a substance field model. A social field is used as the system is a social one (see previous section). The Su-field model is portrayed in figure 17.
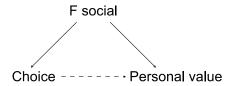


Figure 17. Substance field model of the insufficient interaction

### 6.3.2. Selecting the principles

Not all of the principles can be used. Some of the principles focus on specific fields (such as electromagnetism) or are not relevant to the problem a selection has to be made which will be used. To identify the appropriate standards the inventive standards selection tree (Souchkov, 2013) was used. This resulted in the principles from the groups 1-1-2 to 1-1-5, 1-1-7, 1-2-1 to 1-2-5 and 2-2-1 to 2-3 to be selected. Principles from groups 1-1-2 to 1-1-5 were selected as new components can be added to the system, those from group 1-1-7 as there is a restriction in the number of choices, groups 1-2-1 to 1-2-5 as the negative (insufficient) interaction can be eliminated and groups 2-2-1 to 2-3 as the RPL process in itself is already complex enough and adding components might increase complexity.

### 6.3.3. Generating the ideas

The standards that are selected give suggestions about the direction of thinking in which good solutions can be found. The actual generation of ideas still requires brainstorming and creativity.

However, as the abstract idea is already present in the principle it makes the process easier and points researchers/developers in the right direction. Using the principles described in the previous section 13 ideas were generated. These are presented in table 10.

Table 10. Overview of ideas generated using inventive principles

| Inventive principle | Idea number | Idea |
|---|---|---|
| 1-1-2 | 1 | Creation of multiple tools within a single framework. Tools have the same aim and use the same language. |
| | 2 | Limit the number of choices. The number of choices is linked to the types/groups of value. |
| 1-1-3 | 3 | Creation of a 'validation authority' to validate the multiple options that can lead to RPL. |
| | 4 | Provide other means of personal value alongside RPL. |
| 1-1-4 | 5 | Increase social awareness about the various types of RPL. |
| 1-1-5 | 6 | Increase awareness of learning more explicitly to the non-formal and informal learning environment. |
| 1-1-7 | 7 | Develop RPL choices based on personal value (or of groups of values). |
| 1-2-1 | - | No idea generated. |
| 1-2-2 | - | No idea generated. |
| 1-2-3 | 8 | Make learning the goal instead of recognizing this learning (e.g. through policy). |
| 1-2-4 | 9 | Create a tool to select an appropriate RPL choice based on personal preference. |
| 1-2-5 | - | No ideas generated. |
| 2-2-1 | - | No ideas generated. |
| 2-2-2 | 10 | Create choice categories in which different tools for RPL can be developed. |
| 2-2-3 | - | No ideas generated. |
| 2-2-4 | 11 | Create personalization options within the choices given. |
| 2-2-5 | 12 | Create a translation tool which structures choices and types of value created. |
| 2-2-6 | 13 | Classify the various options into a model. |
| 2-3-1 | - | No ideas generated. |
| 2-3-2 | - | No ideas generated. |
| 2-3-3 | - | No ideas generated. |

## 6.4. Using inventive principles to generate ideas

Besides the inventive standards, inventive principles (cf. annex 8 or Souchkov (2013)) were used to generate ideas. The inventive principles are the tool that is most used in TRIZ to generate solutions. It consists of forty abstract principles that can be used to solve problems. In order to select the most appropriate principles, a matrix was developed linking the principles to technical properties by Mann, Dewulf, Zlotin & Zusman (2003). This allows for a selection based on the problem characteristics.

### 6.4.1. Defining the problem in an abstract manner

Before generating solutions using inventive principles the positive and negative effects of the problem have to be formulated in terms these principles. Using the list of negative and positive effects of the inventive principle matrix (Souchkov, 2013) five negative and one positive effect were found. The negative effects are: information quantity, efficiency of functioning, compatibility/connectivity, convenience/usability and complexity of a system. The positive effect found was: aesthetics/appearance.

### 6.4.2. Selecting the principles

The selected negative and positive effects were looked up in the TRIZ contradiction matrix (Souchkov, 2013). This resulted in the selection of the principles that are displayed in table 11.

Table 11. Overview of the selected principles

| Effect | | Principles | | | | |
|---|---|---|---|---|---|---|
| Negative | Positive | 1st | 2nd | 3rd | 4th | 5th |
| Information quantity | Aesthetics / Appearance | 7 | 3 | 32 | 19 | 25 |
| Efficiency of functioning | Aesthetics / Appearance | 2 | 22 | 32 | 3 | 4 |
| Compatibility / Connectivity | Aesthetics / Appearance | 28 | 7 | 13 | 17 | - |
| Convenience / Usability | Aesthetics / Appearance | 28 | 29 | 22 | 32 | - |
| Complexity of a system | Aesthetics / Appearance | 5 | 32 | 35 | 22 | - |

The final selection of the four principles to be used was based on the number of appearances and rank in the table. For this the following equation was used (equation 1).

Equation 1. Inventive principles ranking formula

$$
\begin{aligned}
Score\ of\ principle \\
&= times\ of\ appearence\ in\ the\ 1st\ row * 5 + times\ of\ appearence\ in\ the\ 2nd\ row * 4 \\
&+ times\ of\ appearence\ in\ the\ 3rd\ row * 3\ + times\ of\ appearence\ in\ the\ 4th\ row * 2 \\
&+ times\ of\ appearence\ in\ the\ 5th\ row * 1
\end{aligned}
$$

The scores of the various principles are displayed in table 12.

Table 12. Selected inventive principles and their scores

| Rank | Principle | Score |
|---|---|---|
| 1 | 32 | 11 |
| 2 | 28 | 10 |
| 3 | 7 | 9 |
| 4 | 22 | 9 |
| 5 | 3 | 6 |
| 6 | 2 | 5 |
| 7 | 5 | 5 |
| 8 | 29 | 4 |
| 9 | 13 | 3 |
| 10 | 35 | 3 |
| 11 | 19 | 2 |
| 12 | 17 | 2 |
| 13 | 25 | 1 |
| 14 | 4 | 1 |

Based on these scores, principles 32, 28, 7 and 22 were selected. These principles are: colour and transparency change (32), principle replacement (28), nesting (7) and blessing and disguise (22).

### 6.4.3. Generating the ideas

The principles that are selected give suggestions about the direction of thinking in which good solutions can be found. The actual generation of ideas still requires brainstorming and creativity. However, as the abstract idea is already present in the principle it makes the process easier and points researchers/developers in the right direction. Using the principles described in the previous section 13 ideas were generated. These are presented in table 13.

Table 13. Overview of ideas generated using Inventive standards

| Inventive standard | Idea number | Idea |
|---|---|---|
| 32 | 14 | Colour code types of recognition based on how much people seeking RPL like it. |
| 28 | - | No ideas generated |
| 7 | 15 | Nest various RPL tools inside each other. As multiple tools are used it is more likely one is liked by the person seeking RPL. |
| 22 | 16 | Develop a set of simple tools which are easy to complete but can be used in a very limited way. |

Note: The numbering of ideas continues from table 10

## 6.5. Conclusion

In this chapter ideas were generated for the contradiction between consensus and personal value. This was done by using inventive standards and –principles resulting in a total of 16 ideas. These ideas will be ranked based on various criteria in the next chapter.

# 7. Ranking the ideas

## 7.1. Introduction
In this chapter the generated solutions from the previous chapter will be ranked. This is done to select the best solution. This is done by using a multi-criteria decision matrix (cf. annex 8 or Souchkov (2013)). Before the ranking, groups will be made of similar ideas. This is done to limit the amount of ideas that have to be ranked.

## 7.2. Grouping the ideas
As the number of ideas is too large to rank directly, some ideas show similarities and to speed up the selection process, groups are made of the various ideas. Grouping was based on the similarities between ideas and resulted in the following groups: classification/model development, validation authority, additional benefits, change in social perception, selection tool and tool modification. Group names were generated based on the similarities between the ideas. The ideas that were included in these groups are presented in table 14. These groups will be used in the ranking procedure.

Table 14. Groups of generated ideas

| Group | Group name | Ideas included |
|-------|------------|----------------|
| A | Classification/Model development | 1, 2, 7, 10, 13 and 14 |
| B | Validation authority | 3 |
| C | Additional benefits | 4 and 8 |
| D | Change in social perception | 5 and 6 |
| E | Selection tool | 9, 11 and 12 |
| F | Tool modification | 15 and 16 |

## 7.3. Defining the criteria
Before scoring the groups of ideas, criteria have to be defined upon which they are compared. Furthermore, these criteria have to be given a weight according to their overall importance.

### 7.3.1. Defining the criteria
The criteria used in the multi-criteria decision matrix were derived from the technical contradictions of the problem (see section 6.2). The three variables in the contradiction were used as criteria to which the ideas were judged. These criteria are: number of choices (for individuals seeking RPL), personal value (for individuals seeking RPL) and wide (social) acceptance.

### 7.3.2. Setting the criteria weights
The criteria were ranked based on importance and given weighs accordingly (with the highest ranking criterion given a weight of three and the lowest a weight of one). This is displayed in table 15. Personal value was ranked the most important as this is the positive aspect of the contradiction. Therefore, maintaining this aspect is important. Wide acceptance was ranked second. This aspect related to the possibility to disseminate solutions. Although important for implementation, it was considered to be less important than the criteria mentioned previously. Number of choices was ranked last as it does not directly contribute to the main problem (although it is part of the contradiction) as formulated in the RCA+ diagram (RPL is used too little).

Table 15. Criteria and their weights

| Number | Criterion | Weight |
|--------|-----------|--------|
| i | Number of choices (for individuals seeking RPL) | 1 |
| ii | Personal value (for individuals seeking RPL) | 3 |
| iii | Wide (social) acceptance | 2 |

## 7.4.   Scoring the ideas

The ranking of ideas was done using a multi-criteria decision matrix. In this matrix the idea groups were filled in alongside the criteria and their weighs. The idea groups were scored on a four point scale ranging from zero to three. If a group of ideas did not comply with the criterion it was given a value of zero, if it partly complied a value of one or two was given and full compliance resulted in a value of three. Values were then multiplied by the criterions' weigh and added together resulting in total score. The results of this can be found in table 16.

Group A was assigned a score of three for the first criterion. This was done as a model provides an overview of the different types of RPL. It does not change the number of choices and (if the model is correct) includes all of them. Therefore, it completely fulfils the first criterion. A score of one was assigned to the second criterion as a model only results in very limited personal value for the individual. It only provides an overview, which indirectly can be used to create value by allowing the individual to choose the RPL option that is right for him/her. The third criterion was assigned a value of two as a model, by explaining the possibilities, can be a tool to create wide acceptance. As it does not so by itself and still requires effort it was not given three points.

Group B was assigned a score of one for the first criterion as creating a validation authority limits the types of RPL to those that are recognized by this authority. An example of this is the approach of the EC in mind and their focus on a limited scope of validation (for employability). However, as it still offers some choice this group of solutions was given one point for this criterion. The second criterion received a value of one. A validation authority will provide recognition by means of a generic system (e.g. through certificates). This limits personal value for the recipient, compared to a tailor-made solution. It is therefore not able to distinguish between individual needs, which is essential for this criterion. For the third criterion a score of two was assigned. This was done because a validation authority, if implemented properly by involving different stakeholders, can get a wide acceptance. An example of this is coordination centre for EVC in the Netherlands. However, not everyone will ever accept such an authority. Furthermore, youth work is rather opposed to the idea of formalization of the sector (ICF GHK, 2014a). Therefore, the full score (three points) was not assigned.

Group C was assigned a score of zero for the three criteria, as it does not put recognition in the centre but rather other beneficial outcomes (such as learning itself). Therefore, it does not address the problem and keeps the contradiction intact.

Group D was assigned a score of zero for the first and second criterion as it only addresses the third. However, the third criterion receives a value of three as it has the potential to change beliefs that exist about RPL and non-formal and informal learning. If this happens, it will also directly address another problem of the RCA+ diagram.

Group E was assigned a score of two for the first criterion as a selection tool can include a great number of tools and provide options for those seeking RPL. However, if the number of options increases the tool itself becomes more complex. At some point the tool will become too cumbersome resulting in it not being used. The second criterion was valued with two points. This was done as a selection tool allows individuals to select the RPL option that is the most suitable for them. However, the number of RPL types that are included in the tool limits the number of options. As stated earlier an all-inclusive tool might be too complex and prevents individuals using it. The third criterion was valued a zero as it does not influence the acceptance of RPL.

Group F was assigned a score of zero for the first and third criterion, as it does not address the number of options that are available in the field of RPL nor acceptance by society. However, it does address the personal value that can be derived from each tool. As it is not completely clear how the modification affects this (as this depends on the modification and the tool) it only receives a score of two.

Table 16. Multi-criteria decision matrix

| Criterion number | Weight | Group | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | | B | | C | | D | | E | | F | |
| | | Value | Score | Value | Score | Value | Score | Value | Score | Value | Score | Value | Score |
| i | 1 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 |
| ii | 3 | 1 | 3 | 1 | 3 | 0 | 0 | 0 | 0 | 2 | 6 | 2 | 6 |
| iii | 2 | 2 | 4 | 2 | 4 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 0 |
| Total score | | | 10 | | 8 | | 0 | | 5 | | 8 | | 4 |

As can be seen from table 16, idea group A (Classification/Model development) has the highest score with ten points followed by groups B and E (with both 8 points). Group C had the lowest score (with 0 points). Looking closer at the ideas that make up this group most of them propose the creation of a model of the various types of RPL (ideas 2, 7, 10 and 13).

## 7.5. Conclusion

In this chapter the ideas generated in the previous chapter were ranked. Ideas were grouped based on similarities. This resulted in six groups to be formed. These groups were compared using a multi-criteria decision matrix. Criteria for this matrix came from the technical contradiction. The ranking resulted in the group proposing the development of a model is adopted. The development of the model will be done in the next chapter.

# 8.    Design of an RPL model

## 8.1.    Introduction

In this chapter a model for the types of RPL will be presented. As seen in a previous chapter, a model describing RPL can contribute to overcome the limited use of RPL in the EU. Within this model the various types of RPL are represented. Before the presentation of the model, the different types of models in the field of RPL are examined. This is done to better understand the differences between these models. Furthermore, these will be used in the creation of the new model. After describing the various model types the description of the new model will be given.

## 8.2.    Existing RPL models

Looking at existing RPL models two different types can be identified: those who focus on the RPL process and those who distinguish different types of RPL. The characteristics of these models will be discussed separately along with a brief discussion of the advantages and disadvantages of these models. These pros and cons of the different types of models will be taken into considerations when it comes to the design of the new model.

### 8.2.1.    Models focusing on the RPL process

The first type of models discussed is focusing on the RPL process. RPL procedures usually follow a specific pattern, which these models try to capture. Examples of this type of model are those of the university of applied science of Amsterdam (HVA) (BeFlex, 2007), the Dutch organization for international cooperation in higher education (Nuffic) (Scholten, 2007) and Scouting Gelderland (Peeters, 2011). Although not directly identifiable as such, the model presented in the Council Recommendation on non-formal and informal learning (European Commission, 2012c) can be seen as a process model as it identifies the steps one has to undergo to reach validation. Examples of this type of models follow a number of comparable steps and are based on the work of Whitaker (1989). These steps are: identification, articulation, documentation, measurement, evaluation and transcription. In the first stage the knowledge and skills of the person receiving recognition are identified. The second step links this to the selected study program, which is then supported by documentation in the third step. The fourth step is comparing the candidates' prior knowledge with the standards of the chosen program and credit is awarded in step five. Step six is merely an administrative step in which the credit is transcribed into a useful record of achievement. This sixth step is sometimes missing in the models described earlier in this section. This seems mostly the case outside formal education where the goal is not gaining credit but is more oriented towards personal development (e.g. see Peeters (2011)).

The advantage of this type of model is that it clearly describes the steps to be taken when setting up an RPL process. It allows all actors involved to be aware of the steps that have to be taken to work towards recognition. This awareness about the process can help to empower candidates (Leary, 2009). However, this focus is on the process rather than the type of recognition makes them less useful for the purpose of this project as it is aimed at identifying different outcomes of the recognition process rather than the process itself. The little variance that exists between the RPL procedures in different settings (formal, non-formal and informal) and between the different examples give shows the lack of connection between the steps of the process and the outcome.

Another aspect of this type of model, which is useful for this project, is the fact it helps in identifying the key players involved in the process. Johnson (2002) describes the three actors involved in the portfolio assessment process as being: the student, the portfolio advisor and the portfolio assessor. Here, the student is primarily responsible for making a claim, supported by the portfolio advisor. The role of the assessor is to assess this claim. However, a fourth party, not mentioned by Johnson, can be identified. This key player is concerned with the validation of assessed claim. The form that this key player takes is varied and is not limited to a single person or a group of persons but encompasses

society itself (Paddison, 2012). Examples of this actor can range from employers who recognize the value of diplomas, certificates and experience candidates put on their curriculum vitae to individuals who value the fact their learning is somehow recognized (e.g. by themselves). This wide notion of possible personifications of this key player is especially important in the youth work sector as here young people only seldom are educated for a formal qualification.

Also, it is possible for several key players to take the form of a single person (e.g. being both the individual seeking recognition and the assessor). An example of this is the Valorise-toi tool where young people are both in the individual seeking recognition and the assessor. Although no advisor is present, this role can be delegated to the tool when looking at the situation on an abstract level.

### 8.2.2.  Models focusing on different types of RPL

The second type of models discussed is focusing on different types of RPL. This type of model tries to discern between the various forms of RPL that exist. These models appear to be fewer in number but are nevertheless extremely valuable when it comes to constructing a RPL language. Examples of this type of model are those of Hart et al. (2009), the one by Smith & Tillema (2003) and the context analysis of Scholten (2007). Although these models mainly describe different uses of the portfolio instrument, they also touch the various types of RPL at the same time. Furthermore, it describes the majority of RPL practices, as the portfolio is one of the widest used instruments in RPL (Fejes & Andersson, 2009). However, it has to be taken into account when designing a model this is not the only tool that can be used (Conrad, 2008) (for examples of other types of tools see section 2.4). Common categories used in these types of models are different types of assessment and the aim why RPL is sought. These categories are useful for the model that is developed in this project, as it allows for a link between the domain of RPL and other areas of educational science.

The main advantage of this type of models is that they take a step back from the tool development and look at why one seeks recognition. As the purpose of a tool is not always defined before developing it, organizations can end up with tools that do not suit their needs or those of the individuals seeking RPL. It is therefore important to look at the purpose of the tool before development starts. Models providing an overview of the different types of RPL can help organizations to define the purpose of the tool they are about to develop. This also can help them to identify the needs of the people they are working with (which can either be professionals, volunteers or target audiences such as young people). Based on the needs of these people, the characteristics of RPL in the country they are operating in (as RPL varies greatly across the EU (Hawley et al., 2010)) and the characteristics of the sector they are operating in (which also differs greatly across the EU (ICF GHK, 2014a)) they can identify the type of RPL that suits them best. Based on this they can then select one or more tools that facilitate this.

### 8.2.3.  The different types of models and the recognition process

The different types of models discussed in the previous sections can be placed in the broader context of the recognition process. According to Hammer (2001) a process is *"an organized group of related activities that work together to transform one or more kinds of input into outputs that are of value to the customer"*. In the context of this study the supplier can be translated as being youth work initiatives. This provides learning outcomes (the input) which is then transformed (the process) by RPL procedures described by process models. The different steps that are described in this type of models can be seen as the different activities that make up the process. The result of the process is some kind of recognition (the output) which can be described by the outcome models. Finally, these outcomes are created for the customers. Here, young people are the customers as they are the ones that benefit from the recognition. A graphical overview of the whole recognition process and the role of the different types of models is displayed in figure 18.
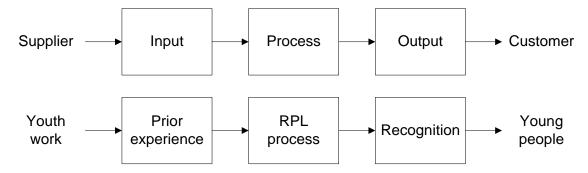
Supplier → Input → Process → Output → Customer

Youth work → Prior experience → RPL process → Recognition → Young people

Figure 18. Overview of the recognition process and the role of the various types of models

## 8.3. Design of a new model

In this section the actual model identifying different types of RPL is described. First, the design approach is elaborated. This is done to provide an insight in the design process. Second, the aim of the model is determined. Determining this helps to understand the intended use of the model.

### 8.3.1. A user based approach to model design

As RPL procedures are the most valuable for those seeking RPL, the approach taken in the design of the model is a user-based one. In here the individual is placed at the centre of the design. In order to achieve this usefulness, organizations need to be able to develop tools, which focus on what their members want. Therefore, the organization providing RPL is placed at the centre of the approach in this project. However, this does not mean the model should be less useful for the organization (and thus indirectly for the individual seeking RPL). As theoretical models can be nice and useful, if they cannot be adopted in practice their use is limited. Therefore, placing usability also at the core of the design approach is critical.

The implication of this decision is that organizations providing RPL need to be able to understand the model. This means language has to be clear and the model itself must not be to complex (i.e. have not too many categories), yet be able to distinguish between different types of RPL. This need for simplicity and inclusiveness align with the problems found in the RCA+ analysis.

### 8.3.2. Aim of the model

The aim of the model is to identify the different types of RPL that exist. This means looking at the various purposes people are seeking RPL for. It is meant to describe these types rather than to prescribe one. This is because the contradiction that was identified as most urgent specifically states the lack of common language. A model that describes the situation, allows for a first step in the direction of a common language. As the most favourable type likely depends on multiple other factors a descriptive model is better in this context than a prescriptive one.

Furthermore, the model will not try to identify individual or groups of competences. As competences can describe a very wide range of skills, trying to classify them will likely result in generic descriptions, a complex system or limited usage of the model. For example, people who want to get mechanical engineering competences recognized have no (or a very limited) need for as class of linguistic competences. It is also believed that organizations working in the various fields have a better knowledge of their respective domains. They are therefore better able to develop tools to these specific fields.

### 8.3.3. Description of the model

#### The four actors in the RPL process

As described in section 8.2.1 four actors exist in the RPL process. These are: the student, the portfolio advisor and the portfolio assessor and the evaluator. The first three of those actors originate in the

context of the portfolio (see Johnson (2002)). However, they can be seen in a broader context by slightly changing their names. By renaming them into 'the individual seeking recognition', 'the process adviser', 'the assessor' and 'the evaluator' they become more tool/method independent as well as well as disconnecting them from formal education (as student is strongly associated with formal education).

Looking at the importance of the different actors, 'the assessor' and 'the evaluator' are the most important when it comes to the recognition of learning outcomes. Although the other actors are important as well, on an abstract level they do not influence the outcomes as much. For example an individual seeking RPL will have different reasons for seeking RPL compared to someone else. However, they are both people seeking RPL and therefore fulfilling the same role in the process. The same is true for people advising candidates. Although the methods and number of advisors can vary their purpose (advising candidates) remains similar.

The remaining two actors can have different purposes. When looking at the assessor a distinction can be made between two categories. In one of those the assessor is the same as the individual seeking the recognition and in the other it is some else. Examples of this last category can include assessors in oral testing in academic settings or ability testing such as during one's exam for a drivers' license. Even when the actual test does not require interaction with a human, such a paper or computer-based tests grading is done externally of the test taker.
An example of the other category is self-assessment. This method can be used to enhance the certainty one has about his/hers self-knowledge as well as seek information about aspects of their self-concept (Sedikides & Strube, 1997). It is based on the assumption that individuals seek an accurate evaluation of the self. This is done by reducing uncertainties about their abilities and assessing those (Sedikides, 1993).

The other actor that varies is that of the evaluator. This actor has to recognize the value of the assessment done by the assessor. This extent of this recognition varies for each recognition tool. This extent of the recognition can vary from being very limited to extensive. Limited recognition happens when assessment results are compared with personal values or to achievement standards that are not widely adopted. Extensive recognition takes place when external parties judge the same as the assessor and attribute some sort of value. This happens when either the individual seeking the recognition or some external standard convinces the actor.

### *Incorporation of the dimensions in a model*
By combining the different representations of the assessor and the evaluator, a 2x2 matrix can be created. Here, the types of assessment are placed on the horizontal axis and the extent of the recognition on the vertical one. This results in the creation of four types of recognition. These types include the variations in actors as described in the previous sub section. This results in the visual representation as given in figure 19. In this model four types of recognition can be distinguished. These are: recognition based on self-assessment with a limited extent of recognition (type I), recognition based on assessment by others with a limited extent of the recognition (type II), recognition based on self- assessment which is recognized extensively (type III) and recognition where assessment is done by others and the recognition is extensive.
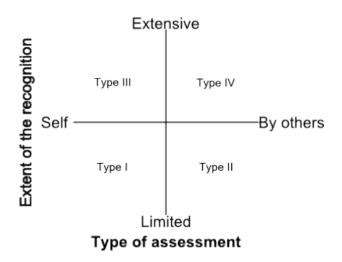
Figure 19. Proposed model describing the various types of RPL

### *The various types of RPL in the model*

From the model four types of recognition can be identified. These types (I to IV) are here discussed in detail.

### Type I

This type of recognition is characterized by self-assessment and a limited extent of recognition. It is aimed at creating a better understanding of one's abilities and understanding achievement as discussed by Hart et al. (2009). Concepts closely linked to this type are self-worth and self-value as the recognition takes primarily place inside of the individual seeking the recognition. As the assessment is done by the individual itself, it is independent of the values placed upon someone by others. However, this does not mean the assessment cannot be influenced by others (e.g. by providing the individual with feedback). Tools that facilitate this type of recognition are aimed at identifying what encompasses certain roles and provide the individual doing the assessment information about what can be learned in specific roles. It is then up to the individual to assess if he or she has these skills and what they are worth to him/her. Examples of such tools are detailed function profiles (mainly for specific competences) or (digital) questionnaires aimed at identifying one's skills (mainly for more generic competences) (e.g. the Competence profile by KFUM Spejderne (2012) or the Youthpass tool (Bergstein et al., 2011)).

### Type II

This type of recognition is characterized by assessment by others and a limited extent of recognition. It is aimed at developing individuals by setting external standards, which are only valued by the individual seeking recognition and/or the organization he/she is working/volunteering in. By using external standards as proof of their learning, individuals can better understand the value of their achievements. This is a mix between what Hart, Howieson and Semple (2009) call proving achievement and understanding achievement. However, the difference with the concept of proving achievement is that it is about proving something to one's self instead to someone else. Therefore, it is also closely related to the concept of understanding achievement. Tools that facilitate this type of recognition are aimed at showing individuals where they are compared to standards. Examples of such tools are diploma's or certificates that are used inside organizations without any external value and tools to measure one's ability and compare those with some form of standard (e.g. the qualification cards by Scouting Nederland (2011) or the UNIQUE learning badges (UNIQUE network, 2013)).

### Type III

This type of recognition is characterized by self-assessment and a broad extent of recognition. It is aimed at getting ones' skills externally recognized without the need to provide proof of this learning.

This requires the individual to explain what is learned and how this translates to the world of the people recognizing the achievement. This utility value can change between different evaluators as their needs are not necessarily the same. It closely relates to the notion of explaining achievement as defined by Hart et al. (2009). Tools used to facilitate this type of recognition are aimed at helping individuals translate their skills into the language used by evaluators. Examples of this are tools that translate specific skills formulated in jargon into language understood by the world of business so one can put this on his/her CV (e.g. the Valorise toi tool by Scout et Guide de France (2011) or the Scout leader skills by Les Scouts (2012)).

This type of recognition is characterized by assessment by others and a broad extent of recognition. It is aimed at getting achievement externally recognized and being able to prove these outcomes. This type of aim relates the closest to the traditional notion of RPL and is called proving achievement by Hart et al. (2009). Examples of this are formal recognition schemes offered by public bodies or formal education institutions and often use the portfolio instrument or assessment centres (e.g. the Oscar competence document (Oscar Online, n.d.)).

An overview of the model with the keywords representing the various types of recognition is displayed in figure 20.
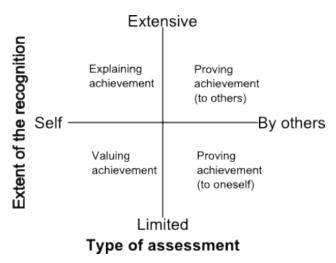


Figure 20. Types of assessment and their keywords related to the different concepts

***Linking the types of recognition to other concepts***
Now the different types of RPL are defined, an effort is made to link the various types to other concepts in the field of educational science.

The word recognition in RPL assumes some kind of valuing. In RPL this valuing is related to prior learning. Before something can be valued it has to be compared with something else thus assessing whether it is worth to recognize or not. This assessing comes in two forms. Assessment can either be summative or formative. Whereas the first type aims to summarize the learning or achievement of an individual at a given time (Shepart, 2005), the second aims to modify activities with the aim of improving these achievements (Crooks, 2001). This often involves the provision of feedback instead of grade or pass/fail decision (Huhta, 2010). Looking at this in the context of EU RPL policy, summative assessment correspondents closely to the efforts made to ease the entry in into formal education. Formative assessment more closely resembles the strategy towards life-long learning. In the first situation RPL serves as a way to test if an individual has the required entry level or can skip parts of formal educational programs. In the second situation RPL is used to recognize ones current abilities with the aim of further developing them.

When comparing the two forms of assessment with the four types of recognition types I and III appear to be of a more formative nature whereas types II and IV seem more summative. Looking closer at the aim of the various types of recognition seem to confirm this belief.

As type I is primarily aimed at enhancing further learning, the purpose of assessment is a formative one. Even though type III is not primarily aimed at further development, explaining ones achievement does allow others to better understand what someone is doing and creates opportunities to give/receive feedback. This feedback can then be used for further development making the recognition formative in nature. Type II and IV recognition however compares ones achievement to some kind of external standard in order to see if these criteria are being met. This involves a pass/fail decision. Here, a judgment is made to award the individual with a competence or not. This makes these types of recognition summative in nature.

Besides this valuing of prior learning, people have to be motivated to seek this value. As it takes them time (and often money) to gain recognition for something they have achieved, there must be some desire to pursue this. Traditionally, a distinction is made between intrinsic and extrinsic motivation (Alexander, Ryan, & Deci, 2000). In here, intrinsic motivation is characterized by the doing activities only for the inherent satisfaction the activity itself gives rather than other separable consequences. Extrinsic motivation on the other hand is about doing activities for other reasons than its primary outcome (Alexander, Ryan, & Deci, 2000). For example, one might learn things simply because he or she loves the process of studying (intrinsic motivation) or because the diploma or certificate might provide other benefits such as career advancement (extrinsic motivation).

When comparing the two forms of motivation with the four types of recognition type I and II appear to be more related to intrinsic motivation. In these types recognition is sought as a means to provide direct reward out of the learning activity itself. This is more clearly expressed in type I recognition than in type II. In type I the purpose of recognition is to explicitly value the act of learning whereas a lesser extent this is the case with type II. However, measuring the learning to a standard and using this result as a foundation for further learning shows a motivation for learning itself. The other types (III and IV) on the other hand show a hang towards extrinsic motivation. As these types seek other gains outside of learning they are more extrinsic in nature. In type III recognition this is the expression of the value of the learning by others (e.g. by peers or potential employers). In case of type IV recognition this external valuing is of more formal nature (e.g. through widely recognized certificates or educational credits).

A similar distinction between different forms of assessment and type of use was made in the classification made by Smith and Tillema (2003). Here, different uses of the portfolio instrument were explored. A difference was made between formative and summative assessment and voluntary and mandatory use. However, in the context of RPL of non-formal and informal learning it might be better to distinguish between types of motivation instead of voluntary/mandatory use as learning in the setting of youth work is a voluntary act compared to (the first years of ) formal education. Making its recognition mandatory could potentially scare people away from the learning activity itself. If the recognition however is voluntary by definition, those who want it recognized have the opportunity to do so while those that do not want it do not have to.

By adding the notion of the different types of assessment and motivation to the model presented in figure 19 an expanded overview of the various types of RPL can be created. This expanded view is presented in figure 21.
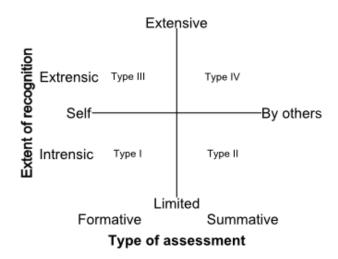
Figure 21.Extended model of the aims of recognition with links to concepts in educational science

***Linking the types of recognition to different levels of recognition***
Besides linking the different types of the model to concepts used in educational science, a link will be made with the various levels of recognitions as defined in the Pathways 2.0 paper by the partnership between the European Commission and the Council of Europe (2011). In this paper four levels of recognition are described: political, formal, social and individual. The political level of recognition describes the political commitment towards recognition through the adoption of legislation or incorporation in political strategies. Formal recognition relates to the recognition of prior learning  by formal education through the provision of official certificates and credit exemption schemes. Social recognition is about the acknowledgement of skills gained through non-formal learning by social partners. It also encompasses the recognition of the organizations providing these learning experiences as something of value. Self recognition is about the assessment of learning by the individual seeking recognition and his/hers ability to use these outcomes in other fields.

The model developed in this project primarily aims at classifying recognition on the self level as it is aimed at identifying different aims people have when it comes to seeking recognition. Even though type I and III only use self-assessment as a method, type II and IV also have strong links to the self level for the same reasons.
A strong link with the social dimension can be made when it comes to type III and type IV recognition. The link with these types is strong as the great extent of the recognition of this type requires at least some acknowledgement by social partners. Furthermore, in case of type III recognition, the explanative nature of this type requires awareness of what is taking place in organizations providing non-formal and informal learning opportunities to ease the recognition process. Also, in type IV recognition social parties must agree that learning outside formal settings has value and therefore accept credit exemption schemes oriented towards non-formal and informal learning. The link between formal recognition and the types in the model can be made with type IV recognition. This is because a part of this type is related to the formal validation of learning outcomes. There is no direct link with the types described in the model and political recognition. However, an indirect one can be identified as political commitment can strengthen the use of all types in the model as the strengthening of political commitment can help the more formal types of recognition (type IV).
The link between the various levels and the types of recognition is displayed in table 17.

Table 17.Link between the levels and types of recognition

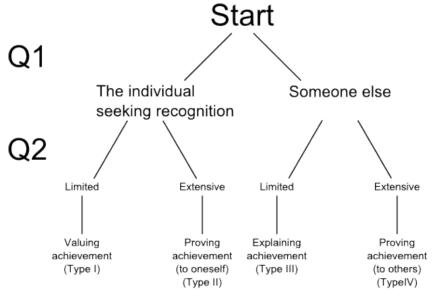| Level of recognition | Type of recognition |
|---|---|
| Personal | I, II, III and IV |
| Social | III, IV (and to a lesser extent II) |
| Formal | IV |
| Political | No direct link |

Having made these links it has to be noted that the classification in the Pathways paper is not made specifically for identifying learning outcomes. In this classification a strong element regarding the recognition of youth work as a sector is present alongside the recognition of non-formal learning as something complementary to formal education. This is mostly visible in the social dimension of recognition. In the Pathways II paper social recognition is defined as: "*Social recognition means that social players acknowledge the value of competences acquired in non-formal settings and the work done within these activities, including the value of the organizations providing this work"* (Partnership between the European Commission and the Council of Europe in the field of Youth, 2011)*.* The second half is far more related with the recognition of the youth work sector than with learning outcomes. Even though this limits the value of the link between the levels of recognition and the types as presented in the model it is important to link them as the Pathways II paper is one of the more important papers in the field of youth work on the topic of recognition.

***Tools and the different levels of implementation***
When trying to classify tools in one of the four types of recognition a distinction has to be made between the intended use and the actual use of the tool as they can be in different categories. An example of this is the system of "attesten" for youth workers in Flanders. These certificates are awarded by the Ministry for Culture, Youth Sport and Media and should be usable inside the whole youth sector in Flanders (ICF GHK, 2014b) (type IV recognition) but are often only recognised in the organization the individual is part of (e.g. the Scouts, the Chiro or KSJ). Also, many self-assessment tools can be easy modified to be used for assessment to others (e.g. through a 360° feedback system). Furthermore, the aim the individual seeks recognition can influence the way a tool is used. For example, a partial qualification procedure can be used to show an individual what he/she is able to do while not qualifying him/her. As a result of this it is necessary to name the level of implementation alongside the tool when trying to classify the tools in one of the categories.

### 8.3.4. From the model to an instrument
As the model in itself is rather abstract an instrument was developed in this project. It is aimed at helping organizations to identify what types of recognition is taking place. Through the use of the instrument they can gain insight in the strength(s) of their organization and find areas to diversifying their recognition practices. This diversification of the recognition practices should be in collaboration with individuals who seek recognition. This is to prevent organizations developing tools that are not wanted by the individuals. The instrument is loosely based on the step of the Valorise toi tool by Scout et Guide de France and follows a three step procedure.  In the first step, organizations list their activities related to recognition. The second step makes them follow a short decision tree (displayed in figure 22) for each of the activities and list them under a type of recognition. The third step challenges organizations to further develop their recognition practices. The instrument can be found in annex 3.

Figure 22. Decision tree used in the tool developed in this project

### 8.3.5. From an instrument to a database

In the last step of the instrument described in the previous sub section a reference is made to a database. The aim of this database is to provide organizations with examples of recognition tools that have already been developed (similar to the ADAM database which features outcomes of the Leonardo Da Vinci program). This database does, at this moment, not exist. However, a prototype was developed to show as proof of concept. The technical description and the prototype of this database can be found in annex 4 and on the CD-ROM accompanying this thesis. The prototype allows people to search on type of recognition, organization using the tool and the developer of the tool.

## 8.4. Conclusion

This chapter develops a new model of the various types of RPL by looking at both existing process-based models and models containing various types of recognition. Both types of models have both positive aspects that were used. Using a user-centered approach a model was developed based on two actors that are involved in the RPL process identifying four types of recognition. These types overlap with those identified in the model developed by Hart et al. (2009). These four types of recognition were linked to concepts related to assessment and motivation and the different levels of recognition. Also the model was transformed into an instrument and a database, which can be used by youth organizations when it comes to tool development. The next step is to evaluate the model. This will be done in the next chapter by conducting a combination of strategies.

# 9.    Evaluation of the project

## 9.1.    Introduction

In this chapter the various elements of this project will be evaluated. This evaluation follows the steps as described in chapter 3. A short summary for each of the evaluation activities with regard to the methodology will be given before presenting the findings. For a more detailed account of the evaluation activities see annex 5.

## 9.2.    Evaluation of the context analysis

The evaluation of the context analysis was carried out by asking an expert in the field of recognition and youth work to comment on the second chapter of this thesis. This was done to see if the chapter provided a complete picture of the situation. The feedback that was provided by the expert was primarily positive. The completeness of the context description was good. However, the expert suggested adding some information on the introduction of the EQF and the Strasbourg process. Furthermore, he suggested the inclusion of some publications by the European Youth Forum (YJF) as the section was too much influenced by official publications of the EC. Adding YFJ documents would present more perspective to the discussion. These suggestions were incorporated into the final version of this section.

## 9.3.    Evaluation of the problem analysis

Experts in the field of RPL evaluated the problem analysis part of this thesis. This was done to see if the method used (RCA+ analysis) resulted in a complete picture of the situation. Furthermore, a professor of the Industrial Design department of the University of Twente evaluated the use of the method. This was done to see if the method was carried out correctly. Both evaluation methods will be explained separately, after which both will be compiled in a conclusion.

### 9.3.1.    Evaluation of the content

Four experts conducted the evaluation of the content of the problem analysis. In this review the experts were asked about the causes underpinning the limited use of RPL in their specific context. The context in which the experts operated varied. An overview of this is given in table 18. These interviews were summarized in individual write-ups. These write-ups can be found in Annex 5.

Table 18. Expert interviews and their context

| Number expert interview | Context |
| --- | --- |
| 1 | RPL in EVC in the Netherlands |
| 2 | RPL in formal (higher) education |
| 3 | RPL in a European context |
| 4 | RPL in Dutch youth work |

The causes related to the limited use of RPL in Europe mentioned by the experts overlapped for a great deal with those found through the literature based Root Conflict Analysis. However, the degree of overlap did vary between the interviews. The opinions of experts 1, 3 and 4 had a great deal of overlap whereas expert 2 had a different opinion. The fact the focus of expert 2 was primarily on recognition by formal (higher) education is possible the result of this as all the causes mentioned by this expert related only to formal education. Even though this recognition is only a small part of the whole recognition spectrum and is not often used when it comes to recognizing learning outcomes through youth work (as stated by expert 3), the cause mentioned was missing in the problem analysis. Besides this, other causes resulting in the limited use of RPL, which are not mentioned in the problem analysis, were mentioned as well by experts 1, 3 and 4. These include the way responsibilities are divided across governmental department (expert 1), the level of organization in the youth sector (low level of organization) and the motivation to initiate youth work projects (not always aimed at learning)

(expert 4). However, they also confirmed the causes that are mentioned in the problem analysis regarding the lack of resources (expert 1, 3 and 4), the language problem (expert 1, 3 and 4) and the quality problem (expert 1). Especially the language problem appeared to be a recurring topic. Both young people (expert 4) and others seeking recognition (expert 1) appeared to have problems with understanding of the language used in this domain. Furthermore, interpretations of the concept RPL did vary. For example expert 3 asked what was meant by recognition when asked about what caused it limited use. This confirms the need for a common language to identify the different types of recognition. Finally, some aspects that are mentioned in the Root Conflict Analysis were not confirmed in the interviews. These are the aspects related to the lack of construct validity and the element related to the fact RPL is looked at an EU level. Although this does not necessary mean these causes do not exist, the fact they were not mentioned puts them into question. However, as both aspects result in an unchangeable negative effect, omitting them from the diagram does not affect the ranking of the contradictions.

### 9.3.2. Evaluation of the TRIZ methodology

A professor of the Industrial Design department of the University of Twente evaluated the way in which the RCA+ method was carried out. The purpose of this was to see if the method was carried out correctly. The use of the method was graded sufficient (8 out of 10). This means the method was carried out correct. Feedback included comments on the step from "too little consensus of what RPL is" and "Too little coherence between RPL definitions". It was suggested there should be one or more steps between these two elements. Although this is plausible, it was not noticed by the interviewed experts.

### 9.3.3. Conclusion

The causes underpinning the limited use of RPL in youth work that were found in the problem analysis correspond to a great extent to those found in the expert interviews. However, the experts also mentioned new causes and left out some causes mentioned in the analysis. Interpretations of the concepts of RPL did vary from recognition by formal education (type IV in the model) to recognition aimed at valuing ones learning (type I). This shows the need for a common language of the different ways to recognize learning outcomes. The use of the methodology was graded sufficient as part of a university course. This is an indicator of the correct use of the method.

### 9.4. Evaluation of the model

Experts from the youth partnership between the European Commission and the Council of Europe evaluated the model. This provided feedback on the completeness of the model with regard to the different RPL outcomes. Besides this, three conferences on this topic were visited to see if the working field agreed with the different types that are described in the model. Finally, a professor of the University of Twente evaluated the use of TRIZ as a way of generating ideas.

### 9.4.1. Expert review

The model presented to the expert group of the youth partnership was received positive. The fact the outside world was included and the actor-based approach was perceived as being positive and an addition to the current models. Despite of this, the terminology used and the model itself was considered to be too complex for individual youth workers. In order to overcome this problem the development a set of guidance questions to identify the different types of recognition was suggested alongside the use of many examples. These suggestions were taken into account and resulted in the development of the instrument for organizations and the prototype of the database.

### 9.4.2. Participation in conferences

As part of the evaluation three conferences were visited. This was done to evaluate the model with the youth sector. The conferences that were visited are: the Observal-Net final dissemination conference, the Eastern Partnership Youth Forum and the EUCIS-LLL week event on validation. For a report on each of the conferences see Annex 5.

In the first two conferences different ways to recognize learning outcomes were formulated. These categories overlapped with those defined in the model. The categories mentioned in the conferences and the links with the types of recognition defined in this study are displayed in table 19 and 20.

Table 19. Outcomes of recognition as formulated in the Observal-Net conference and their link to the different types of recognition

| Outcomes | Type of recognition |
| --- | --- |
| Formal recognition of learning outcomes | IV |
| Recognition of outcomes by employers as a means to enter the labour market | III |
| Recognition as a means for empowerment | I and II |

Table 20. Sub-groups made during one of the workshops of the Eastern Partnership Youth Forum and the link with the different types of recognition

| Sub-group | Type of recognition |
| --- | --- |
| Employment & entrepreneurship | III and IV (the latter to a lesser extent) |
| Personal & social life | I , II (personal life) and III (social life) |
| Empowering & civil participation | I, II (empowering) and III (civil participation) |
| Formal education | IV |

This overlap between the categories is an indicator the model covers the different types of recognition that exist.

In the third conference the importance of the different actors of the recognition process was discussed. Here, three main groups of actors were identified. These are: young people, assessors and employers. Young people are the ones that seek the validation, assessors test whether or not knowledge and skills have been acquired and employers do validate this assessment. These three actors are similar to the ones mentioned in this study. Furthermore, these are the ones that play a crucial role when it comes to the development of the model.

### 9.4.3. Evaluation of the TRIZ methodology
A professor of the Industrial Design department of the University of Twente evaluated the way in which the TRIZ guidelines were correctly applied in the idea generation phase. The use of the method was graded sufficient (8 out of 10). This means the method was carried out correct.

### 9.4.4. Conclusion
The model developed for this project seems to be covering the different ways in which learning outcomes can be recognized. The different types of recognition of the model correspond with the different types of recognition that were presented in various conferences. The actors upon which the model is based correspond with those mentioned in one of the visited conferences. Finally, experts from the youth partnership evaluated the model. Despite they believed the model was too complex for individual youth workers, they model was received as something positive as a result of the incorporation of the different types of recognition.

## 9.5. Evaluation of the instrument
The instrument developed in this project was evaluated by volunteers of scout organizations and by running existing cases from the Observal-Net database through the decision tree. Both evaluation methods will be explained separately, after which both of them will be compiled in a conclusion.

### 9.5.1. Try-out with youth workers
Whether or not youth workers at an organizational level could use the tool has been examined by means of a try-out that was conducted during a conference for scout leaders. In three workshops volunteers in scouting were asked to fill in the tool and to give feedback on it. In total forty people took

part in this try-out. The overall opinion on the tool was that it was useful and it provided insight in the different types of recognition. However, the participants also found that it was not always easy to list what already was taking place in their organization (step 1 of the instrument). This can possibly be explained by the fact the participants were not informed in advance to prepare a list of recognition tools used in their organization. Despite this, the questions were seen as clear and useful to help in the process of categorize the different types of RPL. Also, the instrument was seen as an improvement over the theoretical model when it came to usability.

### 9.5.2. Testing the instrument by analyzing existing case studies

To see if the questions used in the instrument were able to distinguish between the various types of RPL, existing case studies from the Observal-Net database were analyzed on this point.

The fifty most recent cases were selected for further analyses. Of these fifty cases five cases were rejected because they were in a language other than English. As a result five extra cases were added. Cases were spread out over 22 countries in Europe and across a wide range of sectors (e.g. social care, banking and mechanics). An overview of the countries in which the cases studies originated is given in figure 23.
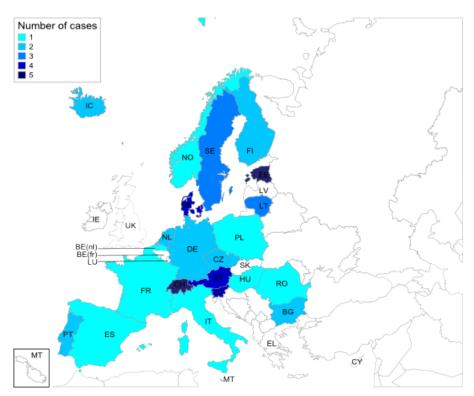


Figure 23. Number of case studies and the countries they originated in

Analysis of the cases took place by reading them and using the decision tree to identify the types of recognition. An overview of the results of the analysis is given in table 21.

Table 21. Number of case studies by type of recognition

|        | Overall | Type I | Type II | Type III | Type IV | Not classified |
|--------|---------|--------|---------|----------|---------|----------------|
| Totals | 50      | 0      | 14      | 4        | 32      | 0              |

Given all the cases were classified using the questions of the tool, it seems they are appropriate for this type of case studies. The fact the distribution is skewed towards type IV is not considered to be a problem given the aim of the Leonardo Da Vinci programme of which these cases are part of (the

Leonardo Da Vinci programme funds "*practical projects in the field of vocational education and training. Initiatives range from those giving individuals work-related training abroad to large-scale co-operation efforts*" (European Commission, 2013c)).

### 9.5.3. Conclusion

The tests conducted as part of the evaluation of the tool give the impression it is useful. The try-out with scout leaders shows the tool can be hard to use when the intended use of tools does not match the actual use. However, participants expressed a positive attitude towards the way the instruments structures different types of recognition. The way in which the recognition types are structured through the decision tree also appears to be adequate given the ability to characterize all of the tested cases. Furthermore, it seems not only useful to discern between different types of recognition in the field of youth work but also in other fields as cases used in the evaluation originated in fields other than youth work.

## 9.6. Evaluation of the prototype

A professor of the Library and Information Science department at the University of Antwerp evaluated the prototype. The database was evaluated on technical parameters. No evaluation took place on the content of the entries. This resulted in a sufficient grade (13 out of 20). With regard the database structure two points for improvement were identified. The first relates to the type of some of the entities in the database. Instead of using text in some of the fields (e.g. the 'used since' field in the 'tool' entity) a numerical value is preferred as this allows for broader search capabilities (e.g. search tools developed before a specific date). The second point relates to the designation of the primary keys of the Organization, Developer and Instrument entities. It was suggested to use a number as a primary key instead of the name of an organization, developer or instrument to exclude the possibility for overlap of two entries. Although the change of this happening is very small, given the organizations are all named in their own language, the costs of changing it in the design stage are minimal compared to an extensive database. This feedback has been incorporated in the final version of the annex that describes the database (annex 4).

## 9.7. Conclusion

This chapter evaluates the different outcomes of the study. The different steps have been evaluated on the right application of the methodology and the validity of the outcomes. Overall, the results of these activities are in line with the results of this study. However, small differences with the results were found as well. These include two additional problem areas (the fact RPL is not purely related to one field of policy and the fact formal education is more focused on knowledge (rather than on skills)) in the Root Conflict Analysis, a slight change in terminology used in the model (as a result of the feedback of the expert group of the youth partnership) and some feedback regarding the database structure. In the next chapter the conclusion of the whole project will be formulated and the results will be discussed. Furthermore, areas of further research and implementation will be formulated.

# 10.  Conclusion & discussion

## 10.1.  Introduction

This final chapter will provide an overview of the conclusions of this study. Also, the limitations of this model will be discussed. Furthermore, areas of future research will be identified together with new potential uses of the model. This chapter concludes with some recommendations regarding the further implementation of the findings of this study.

## 10.2.  Conclusion

This project was aimed at answering two main questions. These questions were:

1.      What causes RPL to be used so infrequently in youth work in the EU?
2.      What would the characteristics be of a model describing various types of RPL?

The outcomes of the RCA+ analysis provide an answer to this question. Three main contradictions were found that causes this infrequent use: the diversity of RPL, the differences between EU countries and a the perception of high standards. Besides these, two more problems were added by the experts that were interviewed as part of the evaluation: the fact RPL is not purely related to one field of policy and the fact formal education is more focused on knowledge (rather than on skills). The relations between the different causes are presented in the RCA+ diagram as incorporated in annex 2. These relations were evaluated as well in this project and were considered to be correct by the experts involved in the evaluation.

For the second question a model describing the different types of RPL was developed. By looking at existing models various attributes were found which were used in the new model. A constant factor in these models is the different uses of assessment in RPL procedures. This factor was included in the model that was developed as part of the project. Besides this, the extent of the recognition was introduced in the model. By placing these aspect on different axes a 2x2 matrix was created resulting in four types of recognition.  Features from the attributes mentioned earlier in this paragraph characterize these types. These four types were then linked to concepts used in educational science. Furthermore, a connection was made with the main model currently used in the field of recognition in youth work. As the developed model describes the different types of recognition in a rather abstract way, it was translated in a practical application that can be used by youth organizations to develop new tools for recognition. Finally a proposition was made for the creation of a database. This adds to the usability of the developed instrument by providing examples of the different types of RPL.

## 10.3.  Relevance of the outcomes

In the beginning of this study its relevance was formulated by looking at the value it could bring to science, society and practice. As the end of this report is near it is time to evaluate what is realized in these three domains.

In the scientific domain the primary contribution that has been realized is the development of the model describing different types of recognition based on the actors involved in the recognition process. Although models describing different ways to recognize learning outcomes exist (e.g. see the model by Hart et al. (2009) or by Smith and Tillema (2003)), these were specifically developed for the different uses of the portfolio instrument. Although the models probably can be extended to other type of instruments, the model developed in this study is independent of tools like the portfolio. As a result it can be used more broadly. Furthermore, this model incorporates the different actors involved in the recognition, something which other models do not explicitly.

The relevance of this project for society is mainly indirect, as it does not directly help young people to recognize the value of the activities that they are taking part in. However, it allows organizations to

develop new tools and choose existing ones that align better with the goals of the organization and the needs of young people. As a result youth organizations will be able to better help young people in getting their skills recognized. When it comes to policy, this study gives policymakers and other stakeholders an overview of types of recognition. When youth work provides all these types of recognition the sector can bring additional value to young people.

In the practical domain the relevance of this study is most visible. The instrument and database that were developed can be used by organizations. As this allows organizations to reflect on their own activities and makes them responsible for the implementation of new recognition practices, this can be the start of a wider use of recognition practices in youth work in Europe. In this process the instrument provides the possibility to create an overview of the current activities related to recognition that are taking place in an organization. The database shows activities that are taking place which can result in sharing good practices throughout the youth sector.

## 10.4. Discussion

### 10.4.1. Reliability
When it comes to the reliability of this study the overall reliability is considered to be acceptable. Although the sample sizes of some parts of the evaluation are a low according to the literature (e.g. the number of experts in the review of the model (eight) is a bit low according to Creswell (2002)), this is compensated by seniority of the participants in these activities. Also, there was a substantial degree of overlap between the opinions of the experts that were consulted in the various evaluation activities which suggests good inter-rater reliability. Similar overlap was found in the conference outcomes, meaning these result are likely reliable as well. Furthermore, similar conclusions were found in different settings (e.g. between the expert review of the model and the conference visits) which also suggest inter-method reliability of the results.

### 10.4.2. Validity
The overall validity is considered to be acceptable. However, some question marks can be placed regarding this as well. These question primarily relate to the evaluation activities.
First, with regard to the evaluation of the use of TRIZ and the technical specifications of the database it has to be noted that both evaluations have been carried out in a different setting than that of this study (that is, in the context of a course from the university of Antwerp and Enschede). In itself, this is not necessarily a problem. However, the differences between these settings will have had some impact on the evaluation. To prevent these differences from becoming too large, both course evaluators were briefed on the fact the results of the assignments were also being used in this study. As a result of this additional feedback was given by the professors. This allowed for a better interpretation of the results of the courses (in comparison to if only a grade was used upon which the evaluation was based).
Second, the expert review for the evaluation of the model was initially planned in a different manner (individual interviews instead of a group discussion). However, the opportunity of doing this in the format used (group interview) arose during the project. This allowed for a consultation of multiple experts at the same time, which, from a practical perspective, was more feasible for this project. Furthermore, this would bypass the possibility of non-response of experts, thus decreasing uncertainty about the timeline of the project. However, this method had a disadvantage as well. By consulting the experts at the same time the opportunity for groupthink was present compared to the proposed method in chapter 3. To which degree this effect appeared was not measured but given the diverse nature of the feedback received by the various experts, these effects probably have been minimal.
Third, the interviews to evaluate the outcomes of the Root Conflict Analysis can be criticized as well. One negative point of this method in this context is the possibility of the occurrence of confirmation bias. As the interviews had the aim of checking the results of the Root Conflict Analysis it was in the interest of the researcher to confirm these findings through the interviews. Even though this threat to

objectivity was partly mitigated by structuring the interview, possibilities existed to steer the interview in a direction favourable for the researcher. Therefore, ideally the interviews had to be carried out by external interviewers. As this was not possible due to the resources available for this project, this did not happen. However, to make sure interviewees agreed with the outcomes of the interview (the write-up) they were given the possibility to comment on the write-ups, which were then included in the final version of the document. Also, including the write-ups in one of the annexes (annex 5) of this report allows others to check the results of the analysis phase of the interviews.

Fourth, the participation in conferences has also some negative sides as an evaluation method. As the model developed in this project was not formally evaluated its completeness was only indirectly measured. Although this is inevitable as it was not possible to influence the agenda of the conferences, it limits the quality of the data gathered here.

Fifth, use of a try-out in relation to the case studies only provided limited insight in the practical usefulness of the tool. Although a sufficient number of people participated in the experiment to reach data saturation (Morgan, 1997) the participants were rather homogenous as all of them belonged to the Scout Movement. Therefore the results of the experiment do not necessarily represent the usefulness for the whole sector. In order to make sure the tool is useful in the whole youth sector more try-outs need to be carried out with participants from other youth organizations. Another point that needs to be mentioned in relation to the try-out is that it was carried out in absence of the researcher. Although the people carrying out the experiment were both briefed in advance, the evidence gathered through this method was not through direct observation or by interviewing the participants directly, but rather by debriefing the two workshop leaders. As a result of this the data gathered is possibly subjected to the interpretation of the test leaders and is therefore not necessary the actual representation of events. However, the test leaders were both experienced (either professionally or through voluntary activities) in the field of recognition and youth work. Therefore, it can be assumed that these effects were minimal. Furthermore, they did not have any interest in manipulating the results in their favour as they led the workshop on a voluntary basis and the outcomes of the evaluation by participants would not have any effect on their position in the organization.

Finally, the results of the test with the case studies can be put into question as well. As the only written records of case studies were examined it was not possible to study the whole setting in which the case studies were done. Although it is believed effort was put into the case study write-ups, studying these secondary sources can leave out vital information. As the aim of a case study is to gain an in-depth understanding of a situation (Yin, 2009), studying only write-ups leaves out information compared to re-doing the case study. Although the latter would not have been feasible given the constrains of this study, this extra work might have led to another distribution of the cases. This shift in distribution in itself would not have been a problem however, as long as all case still were classified to one of the four recognition types. Furthermore, the classification of case studies itself was not carried out by multiple researchers nor evaluated. Although the classification was carried out by the researcher with utmost care this could have lead to misclassifications. Therefore, it has to be recommended to evaluate this part of the evaluation further in another project.

Besides questioning the evaluation activities regarding validity, the selection process that was used to select the final solution (multi-criteria decision matrix) can be put into question as well as it is something that was not evaluated. Given the high number of ideas that make up the selected solution (Group A: Classification/Model development) compared to the other groups of ideas (Group: A has 6 ideas compared to 3, 2 or 1 idea in the other groups), a bias might exist towards this group. As the idea generation and the selection of the final solution were not carried out independent of each other this is very well possible. However, the process of generating the ideas and the selection were conducted separately (a week passed between the activities took place). Furthermore, the argumentation for assigning the values is presented in this thesis alongside with the selection. This allows for others to validate the selection process for themselves. Although this sheds light on the procedure, it would have been better if this activity was evaluated as well (e.g. by using experts).

### 10.4.3. Generalization

Although the root conflict analysis and the model developed in this study are situated in the youth sector, it can be argued the results can be generalized to some extent. Similarly, the evaluation of the model and the tool was restricted to youth work experts and scouts (which implies it only to be usable within the youth sector or maybe alone to the scouts), the ability to generalize the outcomes are primarily the result of the abstract nature of the terminology used. In the evaluation of the instrument, developed case studies outside of youth work were used. These cases were successfully divided in one of the four types of recognition which suggest the model is useful beyond youth work. However, before implanting the model and the instrument in specific sectors validation is needed to ensure it is applicable in the sector.

### 10.4.4. Use of unconventional methods

Several methods were used to define the problem and to gather data in the evaluation stage. Some of these methods are not well known in educational science. In this context the applicability of TRIZ as a method can be put into question. Even though some authors believe the TRIZ philosophy and most of its tools are not exclusively limited to the technical sciences (Kaplan, 1996) and can be used in other domains including educational science, it is a relevant question due to its roots in the engineering sciences. Although examples of TRIZ can be found in music, military strategy (Zlotin & Zusman, 2006), the service industry (e.g. see Lin & Su (2006) or Zhang, Tan & Chai (2005)) and the education of creativity (Fan, 2010), the number of examples is limited. However, these examples show the wide use of the approach and the applicability to a wide range of domains. Nevertheless, this does not necessary mean it can be used in educational science as well. Before addressing the question of applicability in social sciences, a distinction needs to be made between three different components of TRIZ: the philosophy behind it, the tools related to problem structuring (Root Conflict Analysis and ranking methods) and the tools related to problem solving (inventive standards and –principles). With regard to the philosophy underpinning TRIZ, the need to find ideal solutions (that is solutions that have all desirable functions, only positive results, no negative effects, no undesirable function and uses no resources) is something that is also strived for in social sciences (Rubington & Weinberg, 2011). An example of this in educational science is appreciative inquiry, which in its dream phase lets users project an ideal situation. In the next steps this is than transformed into an action plan with concrete actions. And although appreciative inquiry is more a process towards ideality and TRIZ focuses more on direct interventions their aim (reaching an ideal situation) is similar. Regardless of the fact different solutions will be considered ideal depending on the role and worldview someone has, these variations are acknowledged by both social sciences (Rubington & Weinberg, 2011) and TRIZ (Mishra, 2013). As the aims behind social science and TRIZ have strong similarities the use of TRIZ can be considered applicable for social problems.

With regard to the tools that structure problems the most notable question that can be asked is whether complex social problems can be unravelled using the laws of logic. Although, the problems that were found using root conflict analysis overlapped to a great extent with those mentioned by some professionals in the field of RPL, it does not show all the relations between the different causes that were also mentioned. Even though it can be argued this only implies the methodology was carried out incorrect (or incomplete) and correct application would show these connections, it does not necessarily help to solve the problem at hand. Therefore, it is recommended to collaborate with an expert (or even better a group of experts) related the problem that is being solved (in this case recognition in youth work) when using this methodology. The TRIZ expert has a more facilitating role which guides the experts trough the methodology of a Root Conflict Analysis. Besides having knowledge of TRIZ, this facilitator would need additional skills to create an environment in which the experts are collaborating with the facilitator and each other to come to a representation of the situation. In order to create this environment a facilitator could use the first step of the three-step helping model of Hill (2009) in which attention, listening and observation skills are used to identify ones thoughts about a given topic. However, besides finding the right solution, it is also important to find common grounds with stakeholders to implement the solutions in order to change believes and

practices (Kanter, 2004). This more relational approach to problems is something that is missing in TRIZ as the method is very analytical and only considers one perspective, which might not be shared by other stakeholders. However, this does not make TRIZ useless in social sciences but rather limits it. Due to the strict discipline it requires researchers to follow, it might also provide new insights to precisely map out causes, which then can be used together with other methods (e.g. a SWOT analysis). These can then be combined (e.g. by colour coding groups of causes in an RCA+ diagram based on their correlation they have with each other or whether they are a strength, weakness, opportunity or threat) (this was suggested by one of the experts that was interviewed). Another point that can be discussed is related to the interconnectedness of problems in case of the use of 'IF' and 'AND' relationships. Especially 'AND' relationships are relevant here as they imply that solving one problem can lead to other (unsolved) problems becoming obsolete. However, the complexity of social problems would suggest a coordinated approach to solve all problems instead of just one. Therefore, the use of only 'IF' relationships (where all underlying causes need to be solved instead of just one) might be preferred in the social sciences over a combination of both ('IF' and 'AND') types. However, as problems are also dependent on each other, removing the "AND" relation might lead to situations that do not related to the real situation. As there are only few examples of Root Conflict Analysis in the social sciences this has to be studied further before coming to a conclusion. Another issue with Root Conflict Analysis is the causality it assumes between two connected elements. Although this is not a problem when it comes to the technical sciences, social science is much more cautious in the face of causality (Cliff, 1983). Given social sciences operate in systems that are not stable and continuously change (as opposed to stable systems in the natural sciences), this is not surprising. Therefore, it should be noted that a method which implies causality will possibly not generate the most valid results when it is applied in social science. Although this does not mean the method is not useful in a social setting, it strongly implies the method has to be modified. These modifications will make the method more useful when used in the social sciences. A possible modification could be the use of correlations between two factors instead of a causal one.

With regard to the tools that generate solutions some real limitations exist. The best example of this is class 2-4 of the inventive standards which is devoted to solutions requiring electromagnetic fields. As most of the classes of the inventive standards and –principles were derived through patent research, these methods are primarily aimed at applying them in a technical context instead of in the social sciences. However, adaptations were made to the original tools to fit business and organizational contexts by Zlotin and Zusman (1993a; 1993b), which were successfully applied in both organizations and politics (Faer, 1998). An example of this is: "To hit the competitor while not touching him" (Positive effect: hitting the competitor. Negative effect: not touching them) or "The absence of the enemy is a step towards defeat" (Positive effect: absence of enemy. Negative effect: defeat). When translated to a practical solution, this can become the following: finding someone who speaks negatively about the candidate who is not affiliated to your campaign (e.g. a disgruntled employee) or deciding not to take part in a public event (e.g. a specific election debate) and thus placing your competitor at a disadvantage. Also adaptations of the principles exist for journalism and marketing (Vikentiev, 1992). Finally publications exist that are aimed at teaching TRIZ to individuals outside the engineering sciences (e.g. Fox (2008)). Even though this illustrates that it is possible to 'translate' the ideas from the technical sciences to other contexts, it also points out that there is a necessity to do so in order to generate the right solutions. As the unadapted (technical oriented) standards and principles were used in this project, it can be questioned whether or not the right solutions were generated. However, due to the abstract level on which the tools operate there is a good change similar solutions would have been found if an adapted version of the TRIZ tools had been used.

### 10.4.5. Changes to the original plan
Besides the use of unconventional methods and the limitations of the methods used for evaluation some changes were made to the initial plan as described in annex 9. This mainly relates to the evaluation phase of the project where some changes were made and other evaluation methods were used. Instead of contacting experts on an individual basis that took part in the ICF GHK study into the

value of youth work the expert group of the youth partnership between the EC and the CoE was consulted.

Another deviation from the plan was the triangulation of the literature review by asking experts in the field of recognition about the causes of the limited use of RPL in Europe. During the project it was decided to include this triangulation method due to the exotic nature of TRIZ in educational science (as discussed in the previous sub-section) and to increase the validity of the review. As most of the causes mentioned by both methods were the same it is believed the problem analysis has acceptable validity.

Third, the use of case studies to evaluate the model was swapped for the visiting of conferences. This was done as the possibility arose during the project to participate in these events. As this allowed to reach the same goal as the case studies (test the completeness of the model with people working in the youth sector) this method was used instead even though the use of case studies would have resulted in plenty examples of the different types of recognition. However, the prototype for the database tries to make up for this by showing ten examples that were known to exist (by the researcher) in the field of RPL in youth work at the beginning of the project.

Fourth, the development of the instrument for (youth) organizations was not planned at the beginning of the project. However, after the initial feedback of the expert group it seemed necessary to do so. As a model itself has no real purpose without application it seemed the most logic and in line with the experts groups' suggestions for improvement. To see if this instrument was useful for (youth) organizations this was then tested by people working in the youth sector at an organizational level and reviewed by the expert group. Although the result was positive, the population of professionals was not a perfect representation of the sector. Most of the experts that tested the model were involved in Scouting. Even though this is one of the biggest youth organizations in Europe this does not automatically mean that the conclusions are valid for the whole youth work sector in Europe.

## 10.5. Areas of further study

Five areas for future studies can be identified. The first area of further study is the validation of the intervention developed in this project. As the various evaluation activities included a limited number of experts further validation will increase the content- and construct validity of the model. This is especially true for the context evaluation and the problem analysis as here were only respectively one and three experts involved. This number is lower than recommended by Creswell (2002) for these purposes.

Second, it remains unclear to what extent the model is representative for situations outside the EU and youth work. As the intervention is based on EU policy it is worthwhile to compare the outcomes with other policy approaches elsewhere in the world. A possible place to start is the Eastern Partnership (EaP) countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) as a structure for collaboration between the EU and these countries is already in place in the field of youth work. Examples of this collaboration are the Eastern Partnership Youth window (which provided extra funding for the Youth in Action program in order to increase opportunities for young people living in the countries of the EC and EaP to collaborate), the Eastern Partnership Youth Regional Unit (which is aimed at support youth organizations in their contacts with governmental agencies through capacity building) and the Salto Eastern Europe and Caucasus Resource Centre (which is aimed at cooperation between EaP countries and the Youth in Action program) (Agency of International Youth Co-operation, 2013). Another area of expansion for the model is the use of the model outside youth work. As only experts who were connected with the field of youth work tested the model, the results are not necessary representative for other domains.

A third area for further research is which type(s) of recognition can be pursued best by youth organizations in the various EU Member states. As the approaches differ greatly between countries in both the field of RPL (European Commission, 2012b) and youth work (ICF GHK, 2014a) optimal strategies for youth organizations seeking recognition will likely vary.

The further testing of the tool is a fourth area of further study. This testing is possible for both its use

and its validity in both youth work and other sectors. As the tool was tested in only one context (that of Scouting) its broader application in youth work can be put into question. With regard to other contexts outside youth work, emphasis of further research has to be put on whether or not it can be used in practice. Although the test regarding the Observal-Net case studies confirmed that the tool is able to identify the different types of recognition, it was not tested if HR professionals can work with the instrument.

A final area for further research is the development of interventions for the other problems that have been identified as part of the root conflict analysis. As the contradictions mostly were connected by "IF" relationships the main problem can only be solved when a solution is found for all of them. Even though the intervention developed in this study is likely to impact the problem in a positive way, it will not solve it completely. According to Fullan (2007) there are three elements that influence the adoption a change in educational settings. These are the adoption of new tools, new methods and new beliefs. As the interventions developed in this project primarily relate to the adoption of new tools, the other two elements of change need to be developed in order to increase the use of RPL. With regard to the development of new methods Conrad (2008) suggests radical changes are needed here as the way education is currently organized is hindering RPL. It is believed that the adoption of new beliefs is hardest as it requires change of attitudes. As a result it was classified as an unchangeable negative effect. However, this project hopes to be a first step in a series of many which will ultimately result in a wide adoption of recognition practices in Europe.

## 10.6. Further steps for implementation

Besides looking for new areas for research, attention should be paid to the implementation of the ideas and tools developed in this project. Using the strategies described in the 'Making waves' document (Salto-Youth, 2007) four main tracks have been identified for the dissemination and exploitation of the results of this project.

The first track is about the dissemination of the results among other actors in the youth sector. This would include raising awareness by individuals in organizations of the existence of the instrument and the model. A strategy is presenting the instrument and model at youth conferences. Furthermore, the YFJ can play an active role as well as they are the umbrella organizations for youth organizations and national youth councils in Europe. A next step would involve the training of individuals of various organizations to work with the instrument and the model.

The second track is about the dissemination of the results among policy makers on the different levels (local, national and international). Political recognition of the existence of different types of recognition (other than recognition in the form of formal validation of learning outcomes) makes implementation easier as this can help in the financing of the implementation process. To achieve this advocacy is seen as the main method as this is directly aimed at influencing ideas in specific areas (in this case RPL) of specific target groups (in this case political figures). This advocacy can be direct or through other stakeholders in the youth field (such as the YFJ) and depends on the political level the advocacy is aimed at.

The third track is about the dissemination of the results in the academic community. By spreading the results of this project they can be reviewed by others. This helps in the creation of a common understanding of the outcomes of recognition practices. To spread the outcomes, participation in scientific conferences and the publication of articles in academic journals is seen as a logical step forward.

Finally, the fourth track is about the further development of new tools that support the implementation of the ideas discussed in this thesis. This includes the realization of the database as described in section 8.3.5 but also tools (other than the instrument developed in this project) that ease the implementation process. Examples include a website with documentation about the model tailored to specific audiences (e.g. young people, parents, youth workers, policy makers, researchers and other parties that are interested). Doing so will make the materials more available and recognition more accessible to those who want and need this.

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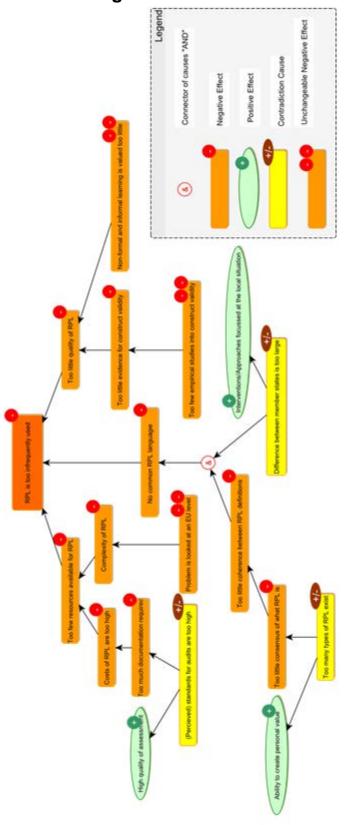
# Annexes

# Annex 1: List of acronyms used

| Abbreviation | Meaning |
| --- | --- |
| APL | Accreditation of Prior Learning |
| CEDEFOP | European Centre for the Development of Vocational Training |
| CoE | Council of Europe |
| DG EAC | Directorate General Education And Culture |
| DG EMPL | Directorate General Employment, Social affairs and Inclusion |
| EACEA | Educational, Audiovisual and Culture Executive Agency |
| EaP | Eastern Partnership |
| EC | European Commission |
| ECTS | European Credit Transfer System |
| ECVET | European Credit system for Vocational Education and Training |
| EEC | European Economic Community |
| EQF | European Qualifications Framework |
| EU | European Union |
| EUCEN | European University Continuing Education Network |
| EUCIS | European Civil Society Platform |
| EVC | Eerder Verworven Competenties |
| LLL | Life-long learning |
| MO | Member Organization |
| NSA | National Scout Association |
| RCA+ | Root Conflict Analysis |
| RPL | Recognition of Prior Learning |
| SGF | Scout et Guide de France |
| TC | Technical Contradiction |
| TRIZ | теория решения изобретательских задач, *teoriya resheniya izobretatelskikh zadatch* |
| VET | Vocational Education and Training |
| VNIL | Validation of Non-formal and Informal Learning |
| WAGGGS | World Association of Girl Guides and Girl Scouts |
| WOSM | World Organization of the Scout Movement |
| YFJ | European Youth Forum |
| YiA | Youth in Action |

# Annex 2: RCA+ overview diagram



**Legend**

- & — Connector of causes "AND"
- Negative Effect
- Positive Effect
- +/- — Contradiction Cause
- Unchangeable Negative Effect

Non-formal and informal learning is valued too little

Too little quality of RPL

Too little evidence for construct validity

Too few empirical studies into construct validity

Interventions/Approaches focussed at the local situation

Difference between member states is too large

RPL is too infrequently used

No common RPL language

Problem is looked at an EU level

Too little coherence between RPL definitions

Complexity of RPL

Too few resources available for RPL

Costs of RPL are too high

Too much documentation required

(Percieved) standards for audits are too high

Too little consensus of what RPL is

Too many types of RPL exist

High quality of assessment

Ability to create personal value

## Annex 3: Instrument developed for this project

# Recognise the recognition

### Step 1: list the initiatives of recognition in your organisation

Ask yourself what initiatives exist in your organisation to recognise the learning that is taking place in your organisation. Examples of this can be tools you use or procedures you have in place to capture learning. Put all these initiatives on a list next to this text. If your done or cannot come up with more examples proceed to step 2.

_____
_____
_____
_____
_____
_____
_____
_____

### Step 2: analyse the initiatives of recognition in your organisation

Determine for each of the initiatives you listed in step 1 which type of recognition they belong to. To help you can use the decission tree displayed next to this text. Ask the two questions for each of the initiatives to find out what type of recognition they belong to. Write down the initiavises in the list belonging to the various types of recognition. This will create an overview of what your organisation does in the field of recognition.

Start

Q1

The individual seeking recognition        Someone else

Q2

Limited        Extensive        Limited        Extensive

Valuing achievement (Type I)    Proving achievement (to oneself) (Type II)    Explaining achievement (Type III)    Proving achievement (to others) (TypeIV)

Q1: Who is doing the assessment?
Q2: To what extent is the achievement recognised?

**Valuing achievement (Type I)**

_____
_____
_____
_____
_____
_____
_____

**Proving achievement (to oneself) (Type II)**

_____
_____
_____
_____
_____
_____
_____

**Explaining achievement (Type III)**

_____
_____
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_____
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**Proving achievement (to others) (TypeIV)**

_____
_____
_____
_____
_____
_____
_____

### Step 3: the next step to develop your organisation regarding recognition

Now you have an overview of the different types of recognition that exist in your organisation. Based on this you can plan the next step of how to develop recognition practices in your organisation. Ask yourself questions like: What type of recognition is my organisation good at? What types of recognition are not yet (or not often) used in our oganisation? What types of recognition do we want to pursue within our organisation? Once you have clear what the next step regarding recognition is going to be write down your plan in the section below. If you want to look concrete example of how other organisations use various types of recognition take a look at the website that accompanies this tool. Here you can find how organisations like yours help individuals to get their learning recognised.

_____
_____
_____
_____
_____
_____
_____

# Annex 4: Technical description of the database

## Introduction
This document describes the database that was built for the Master thesis on the recognition of non-formal and informal learning outcomes in non-formal youth work in Europe. It describes the technical aspects of the database. The actual database can be found on a cd-rom that comes alongside this annex.

## Type of database
For this project a relational database was developed. This type of database is the most modern type of database and is used most often by developers.

## Description of the situation
An (youth) organization uses multiple tools for recognition. These tools fall into one category of recognition which has specific characteristics and are developed by a developer. Users need to be able to search the database for examples of a tool, based on the type of recognition and should be able to contact the organization that is using the tool as well as its developer. Furthermore, they need to be able to see what tool an organization uses and of which type of recognition they are. Third, the database can be searched for tools a developer has developed and see of which type of recognition they are.

## Entities, attributes and relations
Based on the description of the situation the following entities, attributes, relations and queries were identified.

### Entities
The following entities were defined:

- Organization
- Developer
- Tool
- Recognition type

### Attributes
The following attributes can be assigned to the entities (table 1).

Table 1.Entities used in this database and their entities

| Entity | Attribute 1 | Attribute 2 | Attribute 3 | Attribute 4 | Attribute 5 | Attribute 6 | Attribute 7 |
|---|---|---|---|---|---|---|---|
| Organization | Organization number | Name of organization | County of organization | Contact person of organization | E-mail address of organization | Phone number of organization | Website of organization |
| Developer | Developer number | Name of developer | Country of developer | Contact person developer | E-mail address developer | Phone number developer | Website developer |
| Tool | Tool number | Name of tool | Description of tool | Language | Used since | Number of users | - |
| Recognition type | Type of recognition (intended) | Description recognition type | - | - | - | - | - |

Note: The first attribute (attribute 1) will be used as a primary key

**Relations**

The following relations between entities were defined:

- An organization uses a tool
- A developer develops a tool
- A recognition type characterizes a tool

No entities were identified for one of the relations.

# ER-diagram

Based on the characteristics of the database as described in the previous section the following ER-diagram can be drawn. This is displayed in the following illustration (figure 1).

**Organization**
- Number of organization
- Name of organization
- Country of organization
- Contact person of organization
- E-mail address of organization
- Phone number of organization
- Website of organization

Uses

Tool
- Tool number
- Name of tool
- Description of tool
- Language
- Used since
- Number of users

Characterises

**Recognition type**
- Type of recognition
- Description recognition type

**Developer**
- Number of tool
- Name of developer
- Country of developer
- Contact person developer
- E-mail address developer
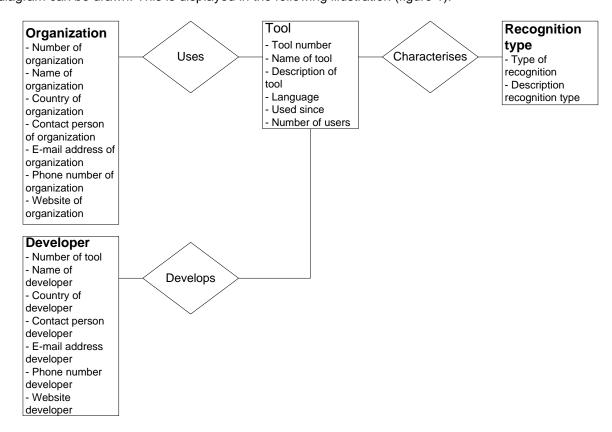- Phone number developer
- Website developer

Develops

Figure 1. ER-diagram of the database

# Cardinality

For the relations the following types of cardinality were established:

Relation: An organization uses a tool

- An organization can use multiple tools
- A tool can be used by multiple organizations
  - ➔ Many to many

Relation: A developer develops a tool

- A developer can develop multiple tools

- A tool can be developed by a single developer
   ➔ One to many

Relation: A recognition type characterizes a tool

- A recognition type can characterize multiple tools
- A tool is characterized by a single recognition type
   ➔ One to many

The relationship between the elements, relations and cardinality are displayed in figure 2.
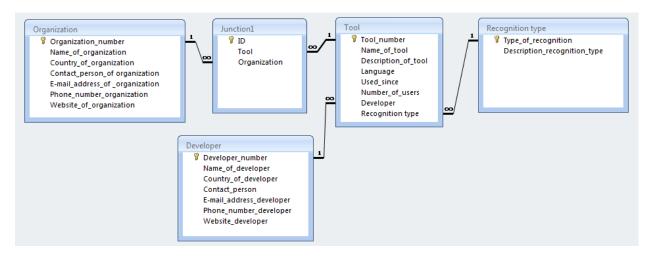


Figure 2. Overview of the relationships and cardinality between the entities

As can be seen from figure 2 an extra table was created called Junction1 for the many-to-many relationship between the entities Organization and Tool. In here the primary keys of the two tables were incorporated. The primary key of this new table is the ID entity.

## Queries

The database must be able to handle the following requests:

- Search the database for tools based on the type of recognition and be able to contact the organization that is using the tool as well as the developer of the tool.
- Search the database for tools an organization uses and see of which type of recognition they are.
- Search the database for tools a developer has developed and see of which type of recognition they are.
- Search the database for the contact details of an organization
- Search the database for the contact details of a developer

This translates in the following SQL queries:

- Search the database for tools, which organization use this tool and which organization developed it based on the type of recognition.

  SELECT Tool.Name_of_tool, Tool.Description_of_tool, [Recognition type].Type_of_recognition, Developer.Name_of_developer, Organization.Name_of_organization, Organization.Country_of_organization
  FROM ([Recognition type] INNER JOIN (Developer INNER JOIN Tool ON Developer.[Developer_number] = Tool.[Developer]) ON [Recognition type].[Type_of_recognition] = Tool.[Recognition type]) INNER JOIN (Organization INNER JOIN Junction1 ON Organization.[Organization_number] = Junction1.[Organization]) ON Tool.[Tool_number] = Junction1.[Tool]

- Search the database for tools an organization uses and see of which type of recognition they are.

  SELECT Organization.Name_of_organization, Tool.Name_of_tool, Tool.Description_of_tool, [Recognition type].Type_of_recognition

- Search the database for tools a developer has developed and see of which type of recognition they are.

  SELECT Developer.Developer_number, Tool.Name_of_tool, Tool.Description_of_tool, [Recognition type].Type_of_recognition
  FROM [Recognition type] INNER JOIN (Developer INNER JOIN Tool ON Developer.[Developer_number] = Tool.[Developer]) ON [Recognition type].[Type_of_recognition] = Tool.[Recognition type]

- Search the database for the contact details of an organization

  SELECT Organization.[Name_of_organization], Organization.[Country_of_organization], Organization.[Contact_person_of organization], Organization.[E-mail_address_of _organization], Organization.[Phone_number_organization]
  FROM Organization;

- Search the database for the contact details of a developer

  SELECT Developer.[Name_of_developer], Developer.[Country_of_developer], Developer.[Contact_person], Developer.[E-mail_address_developer], Developer.[Website_developer]
  FROM Developer;

## Prototype

Based on the description of the database presented here a prototype was built. The aim of the prototype is to provide a proof of concept to illustrate what a database that includes recognition practices in youth work looks like. For this prototype Microsoft Access was used. In the Access file the queries were named Question1 to Question5. This corresponds with the order in which the queries are presented in this document.

# Annex 5: Reports of the various evaluation activities

Table 2. Overview of the evaluation activities

| Type of activity | Name of the activity | Page |
|---|---|---|
| Expert interviews | RPL in EVC in the Netherlands | xii |
| | RPL in formal (higher) education | xv |
| | RPL in a European context | xvi |
| | RPL in Dutch youth work | xviii |
| Expert meeting | | xxi |
| Conference visits | Observal-Net | xxiii |
| | Eastern Partnership Youth forum | xxiv |
| | EUCIS-LLL week | xxviii |
| Tests | The academy | xxix |
| | Test with case studies | xxxi |

# Expert review – Problem analysis evaluation

*Topic: the use of EVC in NL*
*Date of interview: 14/11/2013*

**Summary:**

This document provides a summary of the interview with an expert from the Dutch knowledg centre for Eerder Verworven Competenties (EVC) about the limited use of the EVC tool in th Netherlands. This knowledge centre is focused on the promotion and increasing the knowledge of Accreditation of Prior Learning (APL) practices in the Netherlands.

The limited use of RPL in the context of the EVC certificate seems to be caused by the limited knowledge about what encompasses EVC by employees and employers, the limited (perceived) quality of EVC certificates by formal education institutions, the negative image EVC sometimes has, the resources that are needed in an EVC procedure and the fact EVC not directly related to one of the Dutch ministries. However, they do not have a very clear picture on what is limiting the use of EVC certificates as it is hard to name the different facto and their relations.

## About EVC in the Netherlands

EVC are the prior competences individuals have gained through experiences other than formal education. In an EVC process these experiences are assessed. This assessment is related to specific functions and takes place at different levels of complexity. This process results in an 'Ervaringscertificaat' (Certificate of Experience) which proves the individual has acquired certain competences at a specific level. These certificates can be used to prove the individual has certain skills (for example when applying for a job) or get exemptions for certain courses in programs offered by formal education institutions in (higher) vocational education.

EVC procedures are offered by independent organizations. These organizations have to be registered and work alongside a quality code in order to be allowed to carry out EVC procedures.

## Limited knowledge about EVC

This first reason for the limited use of EVC certificates is the limited knowledge about EVC procedures. What encompasses EVC and what benefits it brings is not always clear with employers and employees. Even though there was a campaign five years ago in which EVC was explained in simple terms, it remains something that is perceived as complex up until today. As a result of this, people do not know what EVC is and what it can be used for. Therefore, it requires motivated HR people to promote its active use within companies. When this is the case, EVC tends to be used more as a tool to accredit ones prior learning.

Besides this, people value official diplomas over EVC certificates making them less wanted in the Netherlands. However, EVC can be a first step towards such a diploma or can be a valuable thing to have as such. In sectors that have implemented EVC procedures very well an increased number of EVC certifications are taking place. Here, formal educational institutions work together with certificate provides and employers. An example of this is Educational fund of the technical installation sector which trained a number of advisers which explain to the various stakeholders in their sector what EVC is and who it is for.

A recent trend that is related to the limited knowledge is that EVC has become an HR tool which sometimes is used in the case of layoffs. As a result of this, employees can have a negative association with being selected for this procedure due to the fact this is can be an indicator of dismissal.

## Limited (perceived) quality of EVC

The second reason for the limited use of EVC procedure is the lack of (perceived) quality of EVC certificates. As there are some examples of EVC certificates that were insufficient, EVC as a whole has a negative ring to it. EVC providers can become certified by evaluation organizations (which use specific quality indicators) and a quality register exist. As a result of this, the terminology around EVC will be changed in the near future. Furthermore, a new range of tools will be introduced aimed at the needs of the individual seeking recognition. In here, what is currently called EVC will be one of multiple options.

## Resources needed for EVC

The third reason related to the limited use of EVC is the amount of resources that are required for this type of procedure. The financial costs of an EVC procedure are around 1500,- Euros. Furthermore, a candidate needs to invest a considerable amount of time to prepare a portfolio. However, the extent of this procedure helps to maintain a level of quality. As a result of this it can be too expensive for individuals. However, EVC procedures can be financed by employers. However, due to the economic situation, business demands are shifting resulting in budgets made available by employers for this less and less as economic priorities demand resources to be shifted to other business areas. Although this can be seen as something negative, the right to take part in EVC procedures is incorporated in many collective bargaining/labour agreements. However, as employees do often not read these agreements, they are not aware of their right to take part in EVC procedures.

With regard to the infrastructure for EVC procedures, its level is more than sufficient given the extent of the practice. According to the interviewee there might be even too much providers for the current market.

## Relation between EVC and ministries

The fourth reason related to the limited use of EVC in the Netherlands is an imperfect fit between EVC and the way ministries are organized in the Netherlands exists. In the Netherlands, EVC is currently the responsibility of the Ministry of Education, Culture and Science. However, EVC as such spans across multiple departments (e.g. also those of Social Affairs and Employment or Economic Affairs) as it is both related to education and the labour market. This resulted in the inter-department collaboration on this topic. This organization of responsibilities is a shift from the situation as it was a couple of years ago. Until 2010, EVC was the responsibility of the 'directie Leren en Werken' (managing board Learning and Working) in which the three ministries that are mentioned in this section were collaborating. This platform had a common management and a shared vision and approach with regard to life-long learning. This collaboration allowed for a common approach which helped the implantation of EVC according to the interviewee.

# Expert review – Problem analysis

*Topic: Validation RPL in formal (higher) education*
*Date of interview: 06/12/2013*

**Summary:**
This document provides a summary of the interview with an expert on validation of non-formal and informal learning.

The limited use of RPL in the context of formal (higher) education is caused as a result of a long standing tradition in this sector to evaluate knowledge rather than skills. As the latter category can benefit the most from RPL people with an unconventional background are put a disadvantaged position.

## Tradition in formal (higher) education

This first reason for the limited use of RPL in formal education is the long tradition this sector has to focus on knowledge rather than experiences and skill. As formal educators are so used to this framework it is hard to think outside the box and test other types of knowledge even though RPL can be especially useful for this last category. However, professors and formal educators are not convinced that experiences should be valued more. This attitude is something that is hard to change. This is a negative thing as education should be open to all even though they might have an untraditional background.

## Implementation

The second reason for the limited use of EVC procedure is the difficulties that are related to the implementation of RPL procedures. Even though a great number of good things are happening (and have happened in the last decade) this can be improved quite a bit.

# Expert review – Problem analysis

*Topic: RPL in a European context*
*Date of interview: 12/12/2013*

**Summary:**

This document provides a summary of the interview with an expert in the field of reco
on an European level. It discusses the recognition of learning outcomes by employers
formal education as well as the resistance that exist in the youth sector against
formalization.

Employers already recognize the skills gained through youth work. However, young p
do not always mention it (or only at the later stage of the recruitment process) and pre
sometimes in a way that is not useful by the employer.
In formal education the main difficulties are the mismatch of the learning outcomes be
formal education and youth work, the use of resources, the issue of trust and the moc
used to recognize learning outcomes.

## Recognition by employers

The recognition of learning outcomes by employers is already taking place. However, some difficulties exist when it comes to individual seeking RPL apply for a vacancy. Skills gained through youth work are not always mentioned and, when mentioned, are not always relevant and/or of the right level of detail. Sometimes candidates only mention their previous experiences during the interview phase of the recruitment process. As a result of this some candidates could increase their changes if they mentioned their competencies gained through youth work on the application form/curriculum vitae. The degree in which this is mentioned varies between sectors and which phase one is in his/her career. People starting out in the labour market have a tendency to mention activities other than experience or education more often than those who have more experience. These other activities act as something that replaces work experience to a certain extent. However, even if the experiences are mentioned, membership of a youth organization alone is often not enough. Employers are more interested in what the individual has learned during the time he/she has spend in youth work activities than just knowing the individual took part in these activities.

## Recognition by formal education

When it comes to recognition of the learning outcomes by formal education three difficulties can be identified: the mismatch of the learning outcomes between formal education and youth work, the use of resources, the issue of trust and the model used to recognize learning outcomes.
The first difficulty is the mismatch between the learning outcomes of youth work and formal education. Where formal education is more focused towards knowledge, learning outcomes gained through youth work are more skill oriented. As a result of this it is hard to find similarities, thus limiting the recognition process.
The second difficulty relates to the use of resources that are required to perform a proper assessment of one's skills. However, the perspective that is taken influences the resources required. When looking from the perspective of the individual seeking RPL, the resources required are rather limited compared to the

potential gains. When looking from the perspective of the educational provider however, this is completely the opposite as educational institution need to invest in making sure the individual has the knowledge, skills or competencies. Furthermore, as public funding for education is reduced in some EU countries (e.g. in the United Kingdom) educational institutions need to rely on other sources of funding, one of which can be increased tuition fees.

The third difficulty is the issue of trust. When looking at the cost and risks of allowing RPL in formal education both factor are higher for RPL compared to traditional admission requirements (having some kind of formal education). Where RPL poses high costs (due to the variability in competences at the moment of admission) and high risks (due to uncertainty about what type of program was offered in youth work), traditional admission requirements are both low cost (as the variation in competences is rather limited) and low risk (as the curriculum is known and accredited). This gives the formal education sector little financially incentives to invest in RPL. However, some institutions can have an incentive to use RPL (e.g. an institution that is struggling to get learners. As a result of this, this institution may have an incentive to provide lots of RPL in order to attract potential students (even if only for a limited period)).

The fourth difficulty is the model that is used in the validation of learning outcomes. One can either get a full module recognized or nothing at all. Partial credit (e.g. credit for three out of five credit points of a specific module) is almost non-existent making it hard for people to receive credit for parts of a specific module (even if he/she posses the knowledge or skills).

## Resistance in the youth sector

Some resistance exists in the youth sector when it comes to the formal recognition of the non-formal and informal learning outcomes gained through youth work. The main reason against this resistance is the believe that the youth sector is not about this type of recognition. As a result there is reluctance to formalization/institutionalization of the informal elements of this sector. However, they are not against more informal recognition of learning outcomes.

# Expert review – Problem analysis

*Topic: Recognition in Dutch youth work*
*Date of interview: 13/12/2013*

**Summary:**

This document provides a summary of the interview with an expert from the Dutch National Agency for the Youth in Action program about the limited use of recognition in the Dutch youth sector. The national agency is responsible for the training and general information for the preparation and implementation of projects

The limited use of RPL in the context Dutch youth work seems to be caused by the limited measuring of learning outcomes, the decreased value of non-formal and informal learning with policy makers and employers, the low level of organization of youth initiatives and the motivation to initiate projects.

## About the Dutch national agency for the Youth in Action program

The Dutch national agency for the Youth in Action (YiA) program is responsible for supporting Dutch youth organizations who want to work with this program. It does so by providing training courses on YiA related topics (such as how to write an application) and providing feedback on applications. Besides this it also provides advice and assistance during the project to participants, project coordinators and beneficiaries.

## The lack of measuring in the youth sector

The first reason related to the limited use of RPL is the fact learning outcomes are often not measured (and therefore are harder to recognize). This lack of measuring is the result of a number of factors. The first of these factors is the fact that youth work learns young people predominately so called 'soft skills' which are harder to measure than knowledge. Furthermore, in order to measure the improvements in these skills, input measures are required as individuals differ from each other. The second factor is the lack of methods/tools that are available to transfer the things that are learned in a project to actual learning outcomes which can be recognized. Even though some good tools exists (e.g. the Youthpass tool), the language (e.g. the word competences) used by these tools can be too difficult for young people or youth workers to understand (especially for those from a disadvantaged background). As a result of this, youth workers can decide not to use a tool to measure learning outcomes. A third factor that is important the fact participants only realize what they have learned after some time. As youth work in the Netherlands is often on a project based it is most of the time not possible to contact participants some time after the project has ended. Therefore, if measuring takes place this will be at the end of the project resulting in only marginal outcomes. The fourth factor that is important is the administrative work measuring can cause. Although tools used in youth work often do not burden youth workers with a lot of administrative work compared to tools used to get more formal recognition, this imposed burden can be sometimes be too much due to the limited resources that are available.

## Importance of learning on a policy level

The second reason related to the limited use of RPL is the shift in the approach towards young people. In the past young people were approached in a more positive way (e.g. by offering them a place in a youth program in which they could learn some skills) than today. This has resulted in the fact learning has become less important in some parts of the youth sector. Furthermore, the value of non-formal and informal learning has decreased as well. Policymakers favour formal learning outcomes over non-formal and informal ones. Therefore, youth organizations have become less (financially) incentivized to make these activities part of their programs.

However, the decrease in perceived value of non-formal and informal learning outcomes is not limited to policy makers. A similar trend can be distinguished by employers with the difference that this is primarily the case with young people that have a lower level of formal education. Whereas it is a bonus for young people with a good (university) education to have extra (international) experiences, this has (almost) no benefits for those with a lower (vocational) education or without any.

## Level of organization of the youth sector

The third reason related to the limited use of RPL is the level of organization of the youth work sector. Youth work in the Netherlands in general is organized at the local level and project based (even though some national initiatives exist). This results in initiatives that do not continue after the first edition of a project has finished even though it can have very positive outcomes. Therefore, it is hard to create a knowledge base within the organization regarding the recognition of learning outcomes. Also the small size of organizations influences this. Due to the limited size the focus is on the actual realization of projects rather than the development of knowledge as no youth workers can be made available for this. This in turn is the result of the decrease in funding of youth work by local municipalities and the shifting focus by policy makers. Together, this leads to the reinventing of the wheel by youth workers when it comes to the learning outcomes and the recognition of them.

## Motivation to initiate projects

The fourth reason that limits use of RPL is related to the motivation to initiate a project. This motivation is not always related to learning outcomes. The interviewee gave an example of a local faith based organization which used to collected clothes and brought them to Eastern European countries. Although this project can have learning outcomes for young people involved in the project, the project was not aimed at this. Furthermore, learning was only a side-effect of the project as it was not part of the projects' structure. Therefore, learning outcomes were only minimal and very vague formulated (e.g. one of the learning outcomes was that participants learned people in the partner organization were happy, even though they had only few possessions). This in turn makes recognizing the value of the learning outcomes hard.

# Review by the expert group of the Youth Partnership – Model evaluation

*Topic: The model in youth work*
*Date of review: 10/10/2013*

**Summary:**

This document provides a summary of the expert review by the expert group of the Youth Partnership between the European Commission and the Council of Europe on the model that was developed for this project. This partnership is focused on improving the social inclusion, participation and intercultural dialogue in the field of youth.

The model that was presented was received in a positive way. The fact the outside world was included and the actor based approach were perceived as being positive and an addition to the current models. Despite of this, the terminology used and the model itself was considered to be too complex for individual youth workers. In order to overcome this problem the development a set of guidance questions to identify the different types of recognition was suggested alongside the use of many examples.

## About the youth partnership

The youth partnership in the field of youth between the European Commission and the Council of Europe was initiated in 2007 to strengthen the collaboration between these institutions. The partnership aims to increase the social inclusion, participation, intercultural dialogue and diversity in the field of youth. In the 2010 – 2013 period the partnership focuses its cooperation to strengthen the use of knowledge-based policy, support youth through capacity building of youth workers, strengthening youth work in specific geographical areas and disseminating the outcomes of the previous activities.

## Feedback regarding the wording of the model

With regard to the terminology used in the model it was believed that terminology that is being used by the sector should be used in the model. This should be done to increase the chances of adoption of the model. In this context special attention should be used to the meaning of 'assessor' as there is a discrepancy between the meaning of this word between the education and the youth sector. It was suggested to use literature reference to define the concepts that are use in the model. The concept of the 'evaluator' was liked as this included the outside world (outside side the youth sector) into the concept of recognition. However, some confusion existed over what was exactly meant by this concept. To avoid misunderstanding it was suggested that the word 'recognizer' might be better in this context.

## Feedback regarding the complexity of the model

With regard to the complexity of the model it was believed that the model was too complex for individual youth workers to understand. It was therefore suggested to develop a tool which helped youth workers to identify the various types of youth work. More specifically the development of a set of guidance questions was proposed for this purpose. However, it was also mentioned that, on a policy level, this complexity was acceptable and would not likely result in problems if examples were provided of the different recognition types in the supporting documentation.

## General feedback regarding the model

With regard to the general aspect of the model it was mentioned that there was some overlap between the different types of recognition presented in the model and the different levels of recognition as discussed in the Pathways 2 paper. It was suggested to incorporate these different levels in the model by adding a third dimension to the model (creating a cube like shape) with a layer for each of the recognition levels.
Also, the fact youth work is very diverse in its nature was mentioned. As a result of this it was believed that it might be a good thing to limit the extent to which the model applied to (e.g. educational youth work like Scouting).
Third, it was noted that, in order to be incorporated into policy, it would be a good thing to include many examples and the type of recognition they belong to in the supporting documentation. These examples could include tools and programs that are already being used/taking place. This would be useful on a practical level as well by allowing organizations to develop tools more quickly.

# Observal-Net – Model evaluation
*Topic: the model in youth work*
*Date of interview: 15/10/2013*

**Summary:**
This document provides a summary of the outcomes that are relevant for this project of the Observal-Net conference. The Observal network is a two year project aimed at setting up a stakeholder centered network in the field of Validation of Non-formal and Informal Learning (VNIL) in Europe.

During the conference different types of recognition were mentioned. These included the recognition by formal education institutions, by employers and as a means for empowerment. These different types were illustrated by mini-cases which were presented during the conference.

## About Observal-net

Observal-Net is a stakeholder network consisting of partners in the field of Validation of Non-formal and Informal Learning (VNIL) in Europe.  The network spans eight countries across Europe. In these countries working groups bring together the different stakeholders to coordinate policy implementation. Besides the national working groups, three thematic working groups exist which span across the participating countries.

## The different types of recognition

With regard to the different types of recognition several were mentioned. Even though the focus of the conference was on the formal recognition of learning outcomes, other types of recognition were mentioned as well. These were the recognition of outcomes by employers as a means to enter the labour market and recognition as a means for empowerment. These different types were exemplified by mini-cases in the advocacy pack that was presented during the conference. These groups roughly correspond with the different types as identified in the model presented in this thesis. The comparison is listed in the table below (table 3).

Table 3. Links between the types of recognition and outcomes mentioned during the Observal-net conference

| Outcomes | Type of recognition |
|---|---|
| Formal recognition of learning outcomes | IV |
| Recognition of outcomes by employers as a means to enter the labour market | III |
| Recognition as a means for empowerment | I and II |

# Eastern Partnership Youth Forum – Model evaluation
*Topic: the model in youth work*
*Date of interview: 22-25/10/2013*

**Summary:**

This document provides a summary of the Eastern Partnership Youth Forum which took place in Kaunas, Lithuania from the 22nd to the 25th October 2013 as part of the Lithuanian presidency of the European Commission. This youth forum was focused on the recognition youth work.

During this conference different outcomes were formulated employment & entrepreneurship personal & social life, empowering & civil participation and formal education. Furthermore the need for a reduction of tools was expressed. However, the tools that remained needed to become more accessible.

Another important aspect that was found during the conference was that the need for the recognition of non-formal and informal learning still remains present.

## About the Eastern Partnership Youth Forum

The Eastern Partnership youth forum took place in Kaunas, Lithuania from the 22nd to the 25th October 2013 as part of the Lithuanian presidency of the European Commission. This forum brought together different stakeholders in the field of youth together from different countries of the European Union and the Eastern Partnership Countries. One of its aims was to enhance the recognition of youth work and non-formal learning in the context of social inclusion and international collaboration.

## Different types of recognition

With regard to the different types of recognition, a classification was made in one of the workshops. Here, four groups were made. These groups were: employment & entrepreneurship, personal & social life, empowering & civil participation and formal education. These groups roughly correspond with the different types as identified in the model presented in this thesis. The comparison is listed in the table below (table 4).

Table 4. Links between the types of recognition and outcomes mentioned during the Eastern Partnership youth forum

| Sub-group | Type of recognition |
|---|---|
| Employment & entrepreneurship | III and IV (the latter to a lesser extent) |
| Personal & social life | I , II (personal life) and III (social life) |
| Empowering & civil participation | I, II (empowering) and III (civil participation) |
| Formal education | IV |

Furthermore, the need for a common language was expressed in the field of youth work. It was believed that this would strengthen the transfer of skills to the labour market. It was noted that the need for strengthening the transfer of the labour market is only one aspect of recognition. Although with the current economic situation and high levels of youth unemployment this is seen as important, it has to be said youth work is more than just preparing young people for employment.

## The need for tools

With regard to the need for different tools in the field of recognition a need to compile different tools from different countries together was expressed. This is interesting as it implies there are too many tools at this moment. In light of the diversity of youth work and recognition practices this is a bit strange as one would expect a need for tools that match the local situation. Although this is true, less tools means more publicity of the tools that remain allowing for greater acceptance of those tool.

Also, a need was expressed to make tools and the supporting documentation more accessible in terms of easy language. This would help young people to be better able to use tools and facilitate inclusion.

## The need for recognition

A short questionnaire was held on the importance of non-formal learning among the participants. This was done by placing forms on the tables during the conference and hope participants would fill in these forms (no structured data gathering). After the plenary session the forms were then collected. 44 people filled in the form (just under 1/3 of the participants of the conference). The results are displayed below (table 5).

Table 5. Results of the questionnaire on the usefulness of recognition held at the Eastern Partnership Youth Forum

| | Number of respondents | Average age | Did you benefit from non-formal education while trying to get a job? | | | How do you think experience in non-formal education have already or will impact your career? | | |
|---|---|---|---|---|---|---|---|---|
| | | | Yes | No | I don't have an opinion | Without experience in non-formal education I couldn't achieve anything | Non-formal education will help me, but university education is more important | Competences which I gained in non-formal education won't have any impact on my career |
| Totals | 44 | 27 | 36 | 5 | 3 | 24 | 19 | 1 |
| **By Gender** | | | | | | | | |
| Male | 27 | 29 | 22 | 3 | 2 | 14 | 13 | 0 |
| Female | 17 | 25 | 14 | 2 | 1 | 10 | 6 | 1 |
| **By country** | | | | | | | | |
| Georgia | 3 | 30 | 3 | 0 | 0 | 3 | 0 | 0 |
| Ukraine | 4 | 24 | 4 | 0 | 0 | 2 | 2 | 0 |
| Turkey | 4 | 28 | 3 | 0 | 1 | 1 | 3 | 0 |
| Armenia | 2 | 29 | 1 | 1 | 0 | 1 | 1 | 0 |
| Azerbaijan | 3 | 29 | 3 | 0 | 0 | 1 | 2 | 0 |
| Hungary | 2 | 24 | 1 | 1 | 0 | 0 | 2 | 0 |
| Belarus | 2 | 29 | 1 | 1 | 0 | 1 | 1 | 0 |
| Lithuania | 8 | 26 | 7 | 0 | 1 | 8 | 0 | 0 |
| Slovakia | 1 | 23 | 1 | 0 | 0 | 0 | 1 | 0 |
| Austria | 1 | 39 | 1 | 0 | 0 | 1 | 0 | 0 |
| France | 1 | 34 | 1 | 0 | 0 | 0 | 0 | 1 |
| Czech Republic | 1 | 25 | 1 | 0 | 0 | 1 | 0 | 0 |
| Estonia | 1 | 26 | 1 | 0 | 0 | 1 | 0 | 0 |
| United Kingdom | 2 | 44 | 1 | 1 | 0 | 1 | 1 | 0 |
| Moldova | 3 | 25 | 3 | 0 | 0 | 2 | 1 | 0 |
| Serbia | 1 | 31 | 0 | 1 | 0 | 0 | 1 | 0 |
| Netherlands | 1 | 24 | 1 | 0 | 0 | 0 | 1 | 0 |
| Poland | 4 | 22 | 3 | 0 | 1 | 1 | 3 | 0 |
| **By age group** | | | | | | | | |
| 15-19 | 2 | - | 1 | 0 | 1 | 2 | 0 | 0 |
| 20-24 | 12 | - | 9 | 2 | 1 | 4 | 8 | 0 |
| 25-29 | 18 | - | 16 | 1 | 1 | 9 | 9 | 0 |
| 30-34 | 10 | - | 8 | 2 | 0 | 7 | 2 | 1 |
| 35+ | 2 | - | 2 | 0 | 0 | 2 | 0 | 0 |

Note: Thanks to G. Vasiliünaité for allowing me to use her data

The result of the questionnaire confirms the belief that non-formal education is an addition to formal education. When sorting the data by gender, country of origin, age and the overall result show a majority of the respondents believe non-formal education helps them in their working life, both in the present and in

the future this is an important topic to work on. However, it has to be noted that the distribution might be skewed resulting in a positive result as the respondents are not a random sample of people (respondents were primarily youth workers) and the number of respondents is low (n=44).

# EUCIS-LLL week – Model evaluation

*Topic: Validation of non-formal and informal learning in a mobility context*
*Date of event: 05/12/2013*

**Summary:**

This document provides a summary of the event on the validation of non-formal and informa learning in mobility context as part of the EUCIS-LLL week.

In this conference three issues with validation and three actors involved in the validation process were identified. The issues with validation that were mentioned in this conference were: lack of trust, implementation and the connection with real-life practices. The actors in the RPL process that were identified were: young people, assessors and employers.

## About the EUCIS-LLL week

The European Civil Society Platform on Life-Long Learning (EUCIS-LLL) is a platform of civil society organizations that promotes a holistic vision on life-long learning. This organization organized a series of events in the week of 2-6 December 2013 on the topic of life-long learning. One of these events revolved around the validation of non-formal and informal learning.

## Issues with validation

Several issues were identified as limiting validation. These issues were the lack of trust, implementation and the connection with real-life practices. With regard to the issue of trust it was mentioned that there often is a lack of trust with employers when it comes to the validity of the assessment. This results in them relying on official certificates and diplomas of formal education institutes instead of certificates by youth organizations. The issue of implementation is about the spread of tools and methodologies to the local level. Even though it was believed that on the European level validation tools exist they are not used at the local level. Third, the connection with real-life situation was mentioned. Here it was mentioned that the transfer from real-life situation to official documents is hard due to the variability between these situations.

## The actors in the validation process

During the conference the actors that are involved in the validation process were a topic of discussion. Three main groups of actors were identified. These are: young people, assessors and employers. Young people are the ones that seek the validation, assessors test whether or not knowledge and skills have been acquired and employers do validate this assessment.

# The Academy – Instrument evaluation

*Topic: the use of tool in Scouting*
*Date of the try-out: 29/10/2013 – 03/11/2013*

**Summary:**

This document provides a summary of a try-out that was carried out during the Academy. This conference brought together volunteers and professionals active in Scouting. The try-out was aimed at testing the usability of the instrument for recognition that was developed in this project in a real-life situation.

The usability of the instrument was overall evaluated by the participants as good. Although they had some difficulty with the identification of RPL practices in their organizations, they liked the structure and the way the instrument worked. An improvement that was suggested by some of the participant was to provide some examples for the first step.

## About the academy

The academy is a yearly organized by the European region of the World Organization of the Scout Movement (WOSM) and the World Association of Girl Guide and Girl Scouts (WAGGGS). The aim of the conference is to share best practices in the European Scout Region.
The Academy is open to everyone with a position, or who have the potential and are preparing to hold a position, at national level in Member Organizations (MOs) and National Scout Associations (NSAs), from members of working groups to Chief Commissioners.

## Methodology

The academy will feature a series of workshops in one of which the model and instrument developed in this thesis were presented. This workshop was on the recognition of non-formal learning in Scouting. This workshop ran three times during the event and lasted 3 hours. As part of this the model and instrument developed in this project were presented in the first part of the workshop. Participants in the workshop tried to use the instrument within the scope of their own national scout association. This resulted in around forty people trying the model. Afterwards participants were asked if they had any comments on the model and/or instrument.

## Usability of the instrument

With regard to the usability of the instrument it was found that the participants in the workshop were able to work with it. However the experienced some difficulty while doing so. Especially the first step (listing the activities that were taking place) was something that was somewhat hard. This seemed to be caused due to the unpreparedness of the respondents as they were not asked to prepare a list of this in advance.

# Feedback on the instrument

The participants in the workshop perceived the instrument to be a usable addition to the existing tools in the field of recognition. The structure the instrument brought provided a framework which was appreciated. However they would liked some examples for the first step to help them on their way.

# Case study test – Instrument evaluation

*Topic: Decision tree test*
*Date of the evaluation: 20/10/2013*

**Summary:**
This document provides a summary of the evaluation that was carried out on the case study database of the Observal-Net program. The evaluation was aimed at determining if the questions that are used in the decision tree of the instrument were able to characterize the type of recognition of real life examples of recognition.

All the cases that were selected were classified. This indicates the decision tree is able to classify examples from real life situation. Furthermore, the distribution between the types of recognition followed the distribution that was predicted.
Besides the good results regarding the ability of the instrument to classify the cases, the evaluation is a demonstration of the ability to use it in a wider context than youth work.

## About the Observal-Net database

The Observal-Net database is a database which brings together a number of case studies in the field of RPL across different sectors throughout Europe. It was developed as part of the Observal-Net program and its predecessor (the Observal program) over the course of five years. The case studies were drawn up by researchers that were part of this project and each follows the same template.

## Methodology

As part of the evaluation of the instrument developed to help organizations identify the types of RPL that are taking place within the organization 50 case studies were analyzed. This was done to see whether or not the decision tree used in the instrument consisted of appropriate questions to identify the different types of RPL. Case studies came from the Observal-Net database. This database was compiled as part of the Observal-Net project (and its predecessor the Observal project). This project was funded by the Leonardo Da Vinci fund of the EC (EUCEN, SI).

The fifty most recent cases were selected to be analyzed. Of these fifty cases five cases were rejected because they were in a language other than English. As a result of this five extra cases were added. Cases were spread out over 22 countries in Europe and across a wide range of sectors (e.g. social care, banking and mechanics). An overview of the countries in which the cases studies originated is given in figure 4.
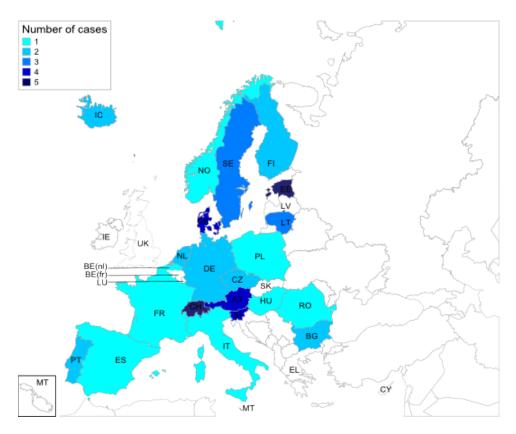
Figure 3. Number of case studies and the countries they originated in

## Outcomes of the analysis

Analysis of the cases took place by reading them and using the decision tree that is part in the instrument developed as part of this project. An overview of the results of the analysis is given in table 6.

Table 6. Number of case studies by type of recognition and year

| Year | | Type of recognition | | | | Not classified |
|------|-----|-----|-----|-----|-----|-----|
| | | I | II | III | IV | |
| 2013 | 9 | 0 | 1 | 1 | 7 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 28 | 0 | 9 | 2 | 17 | 0 |
| 2009 | 7 | 0 | 1 | 1 | 5 | 0 |
| 2008 | 6 | 0 | 3 | 0 | 3 | 0 |
| Totals | 50 | 0 | 14 | 4 | 32 | 0 |

It was possible to classify all the case studies in one of the four types of RPL that were identified. Most of the cases were done in 2010. Regarding the types of RPL, most of the cases were classified as being type IV with a smaller number falling in category II and III. No cases were identified as being type I. An explanation for this distribution can be given when looking at the nature of the Observal-Net project. As this project was funded by the Leonardo Da Vinci fund its focus was on formal validation with a specific focus on Vocational Education and Training (VET).

## Implications for the instrument

The fact it was possible to classify the cases using the decision tree is an indicator for the validity of the instrument. As no cases could not be classified (with the exception of the cases that were discarded as a result of language), it is believed the question used in the instrument provide a good way to identify RPL instruments in one of the four categories. Therefore, its recall value is high. Furthermore, the fact the distribution is more or less as suspected (a high number of type II and IV classifications) is an indicator of the precision with which the instrument works.

Finally, the ability to use cases from different fields (other than youth work) is an indicator for the transferability of the instrument to other sectors. This is positive as it allows for a wider application of both the instrument and the model behind it.

## Annex 6: Guidance notes

**EXPERT REVIEW GUIDANCE NOTE**

## Introduction

This guidance note is meant to provide a detailed description of how the expert review of the model will be carried out. First the method of approach is listed describing why the expert review is carried out. The next section (Task of the researcher) gives a detailed overview of the process of conducting the expert review. For each of the six sub-steps details are provided on the actions to be undertaken in this phase. The two following sections provide the contact letter (to be send by e-mail) and the topic guide of the interview.

## Method of approach

As mentioned in the research proposal, the main purpose of the expert review will be to evaluate the completeness of the model on the various types of RPL in the youth work sector.

The objective of the expert review is to determine if the model incorporates the various types of RPL, to see if it incorporates the various RPL tools and if the actors involved in the RPL process are enough incorporated in the model as well if its usable in the youth sector.

The main role of the researcher is to facilitate the expert review process and to produce a write up describing the process and the result of this review.

## Task of researcher

The expert review of the model will include interviews will take place by phone/Skype with experts in the field of RPL. Number and criteria of experts are described in the research proposal. The tasks and outputs are described briefly in the table below (table 7) and in more detail in the rest of this guidance note.

Table 7. Tasks of the researcher in the expert review

| Expert | Number of interviews | Desk research | Outputs | Other tasks | Contact |
|---|---|---|---|---|---|
| Name of the initiative | One to be carried out by phone/Skype (for each expert) | Review expertise of expert | Interview write-up | Import interview write-up into NVivo Code case-study along determined nodes Expert review write-up | Name E-mail Phone number |

**Task 1: Selection and review of the expert**

The expert interview write-ups will be based on the interview. Before being able to carry out the interview a selection needs to be made. Therefore, the following steps need to be carried out before the interview:

- In order to be familiar with whether or not the expert qualifies as an expert for this study a short background check of the potentially experts needs to be carried out. This will be done by reviewing their professional online profiles (e.g. LinkedIn on personnel pages of academic institutions). This will result in a short-list of people who qualify as an expert in this study.
- In order to finalize the selection process of the experts of this study, short-listed experts will be selected based on work-experience in the field of RPL and youth work. Experts with experience in both RPL and youth work will be selected first before experts with experience in RPL only. A total of eight experts will be selected.

**Task 2: Arrange the interview**

After completion of step one, the expert will be contacted by e-mail. In case the contact details of this person are not known this e-mail will be send to a general address or the general telephone number will be called in order to retrieve these contact details.

After the initial contact by e-mail (see contact letter further in this document) the expert will be called to confirm their participation with the study and to arrange a date for the interview. If the expert did not respond to the e-mail, a follow-up call will be made at the day specified in the e-mail.

During this phone conversation, the following will be explained:

- The purpose of our study and the aim of the expert review.
- The number of people that need to be interviewed in order to participate in this study (one).
- That the case study interviews will be carried out by telephone/Skype.

**Task 3: The interview**

After the interview has been arranged the case study can be carried out. The case study interviews will be carried out by phone/Skype. Before the actual interview the interviewee will be asked for permission to record the interview. This recording is done to aid the researcher in the next step of the process (the write-up). After the study is completed the recording of the interview will be deleted.

The topic guide for the interview can be found below.

**Task 4: The write-up**

After the interview has been carried out the researcher will create a write-up. This write-up follow the topics that were mentioned in the interview en will be based on a template (displayed below). The write-ups will be summaries of the interviews and will be stand-alone documents. One write-up will be created for each of the interviews. No full transcript of the interview will be created. This is done as doing so is not required for this study. Write-ups will be send back to the experts to validate them. This also gives them the opportunity to provide comments if needed. These comments will be incorporated in the final version of the write-up. When agreement is reached with the expert on the write-up the researcher can proceed to the next step after making sure the write-ups are made anonymous.

**Task 5: Coding the write-up**

After the completion of the write-up of the write-up the documents will be imported and coded into NVivo. Coding will take place on predetermined nodes to ensure consistency. The whole document needs to be coded. The coded documents will be made available on request at the end of the study.

**Task 6: Writing the review**

After all the interviews have been coded in NVivo the write-up of the full expert review can be done. This will be base on the coding done in the previous step.

# Contact letter

Dear [insert name],

The University of Twente is carrying out a study on the recognition of prior learning in youth work

The overall goal of the study is to gather more evidence and thereby map and analyze the scale, types and value of different forms of recognition of prior learning in the youth work sector carried out in EU Member States. This is done with the purpose of identifying and explaining how much and in what ways recognition of prior learning takes place in this sector.

In order to explore the different aspects of recognition of prior learning in youth work, a model was developed with the aim identifying different types of RPL that take place in this sector. To validate this model an expert review is carried out. Based on your expertise in RPL we would like to include you in a review of this model. Therefore, we would be very grateful if you could provide assistance with this project.

I would propose to further discuss the details of this study with you [insert day(s)]. I would really appreciate it if you would please be so kind and confirm a time is suitable and I can give you a call to explain the above further and discuss your participation.

Please do not hesitate to contact me in case of any queries or problems.

With kind regards,

[insert name plus signature]

# Topic guides

The interviews that will be carried out in this study do not have very structured interview guides. The questions are purposefully kept very broad and open as this allows for the exploration of a wide range of issues which may come up when the interviews are carried out. During the interview the researcher should aim to see which issues are important to each interviewee and to have a conversation with them, rather than probing with pre-conceived ideas. These interviews should be more 'organic' and reflective.

The following questions are HEADLINE questions, which mean that they are very broad opening questions to explore what interviewees might have to say about their experience with recognition of prior learning in youth work.

# Interview questions

### Introduction
Before beginning the interview explain shortly about the study and the role of the interviews. It's important to mention the review will be used to evaluate the model.

### Completeness

Do you think the model includes the different ways learning outcomes can be recognized?

(if no) What types of recognition are missing in the model?
(if no) How would you include these types of recognition in this model?

What do you think about the way the model is set up?

**Complexity**

Do you think the model is too complex for youth workers to use?

(if yes) What elements do make the model too complex?

Do you think the model is too complex for youth organizations to use?

(if yes) What elements do make the model too complex?

(if yes on one of the previous questions) Do you have suggestions to make the model simpler?

**Usefulness**

Do you think this model is useful for the youth sector?

What makes you think so?

What specific aspects are useful?

Do you think this model has uses outside the youth sector?

**Other comments**

Do you have other comments regarding the model?

(if yes) What are these comments?

Do you have suggestions to improve this model?

(if yes) What are these suggestions?

**Ending**
Thank the expert for his/her participation. Explain the follow-up procedure regarding the write-up and the possibility to provide additional comments afterwards.

**Template for the write-ups**

# Title of the write-up – Model evaluation

*Topic: Subtitle Date:*
*Date of the interview*

**Summary:**

Here, you should write a brief summary/introductory paragraph that highlights the key elements of this interview as to what it is that their activities are discussed.

## About

This section should provide an overview of the topics that were discussed. The aim is to quickly provide an overview of the context.

## Feedback regarding the terminology used in the model

This section should cover the feedback that was given about the terminology that was used in the model.

## Feedback regarding complexity of the model

This section should cover the feedback that was given about the complexity of the model.

## General feedback regarding the model

This section should cover general feedback about the model.

# PROBLEM ANALYSIS GUIDANCE NOTE

The guidance note for the problem analysis is very similar to the one used for the the expert review. However some differences exist. These are discussend in the next sections.

## Number of participants

As mentioned in the chapter on research methodology four experts will be interview. These are selected from governmental and non-governmental organisations as well as academia.

## Interview questions

Different questions will be used for this part of the evaluation. The questions are headline questions.

**Introduction**

Before beginning the interview explain shortly about the study and the role of the interviews. It's important to mention the review will be used to evaluate the problem analysis.

**Causes related to the limited use of RPL in the EU.**

What do you believe causes the limited use of RPL in the EU?

Do you believe there are other causes?
(if yes) What are these causes? (Afterwards repeat the previous question. Repeat until the answer is no)

(if no) Do you believe (cause from the RCA+ diagram that has not been mentioned already) could cause the limited use of RPL?

   (if yes) Can you explain what makes you belief this? (Afterwards repeat the previous question. Repeat until the no causes of the RCA+ diagram are left)
   (if no) Can you explain what makes you belief this? (Afterwards repeat the previous question. Repeat until the no causes of the RCA+ diagram are left)

**Ending**

Thank the expert for his/her participation. Explain the follow-up procedure regarding the write-up and the possibility to provide additional comments afterwards.

## Write-up template

The template used will be similar to that of the expert review of the model. The main difference is that the headings are not fixed but headings should be used that summarise (groups of) causes that are mentioned by the interviewee.

# Annex 7: Coding trees used

## Coding tree used for the expert review of the model
**Completeness**

Elements included in the model

Elements missing in the model

       How to include missing elements

Setup of the model

**Complexity**

Complexity of the model for youth workers

       Elements that make the model too complex

Complexity of the model for youth organizations

       Elements that make the model too complex

Suggestions to make the model simpler

**Usefulness**

Usefulness for the youth sector

       Aspects that make it useful

Usefulness outside the youth sector

**Other comments**

Comments

Suggestions for improvement

## Coding tree used in the evaluation of the problem analysis
**Resources**

Costs

Complexity

**Language**

Coherence between definitions

Differences between countries

**Quality**

Validity

Valuing of non-formal and inforal learning

**Other causes**

(Nodes based on the aswers of the experts)

# Annex 8: Explanation of TRIZ methods used

## Introduction

In this annex a short explenation will be given regarding the different elements of TRIZ used in this study. This explanation is based on the book "TRIZ and xTRIZ Techniques and References: Technology and Engineering Applications" (Souchkov, 2013) and the course "TRIZ Fundamentals" offered by the departments of Mechanical Engineering and Industrial Design of the University of Twente.

## About TRIZ

### Approach to problem solving

TRIZ approaches problem solving in a very specific way. Instead of looking directly for problems for a specific problem, it first translates the problem to an abstract one. This abstract problem is then solved on an abstract level. These solutions have been derived from patent research (currently over a million patens have been researched) in which common solutions were found on an abstract level. These abstract solutions are limited in number. In the next step these solutions are translated back into problem specific solutions (which can solve the problem). These solutions are then evaluated to see which one solves the problem best. The process of problem solving is displayed in figure 5.
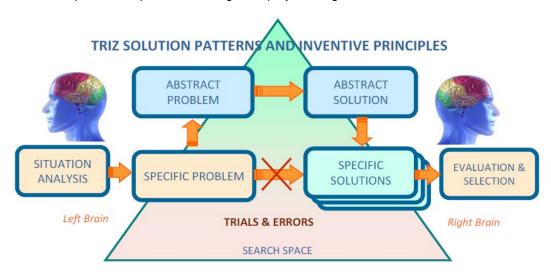


Figure 4. TRIZ approach to problem solving (Souchkov, 2013)

Although the translation from abstract solutions to specific ones still requires knowledge about the situation it limits the number of trial and error cycles which are needed to reach the ideal situation. Furthermore, it makes the creative process more structured and makes it more accessible (and understandable) to other people.

**Problem solving process**
The process TRIZ uses to solve problems is standardized. This is displayed in figure 6.
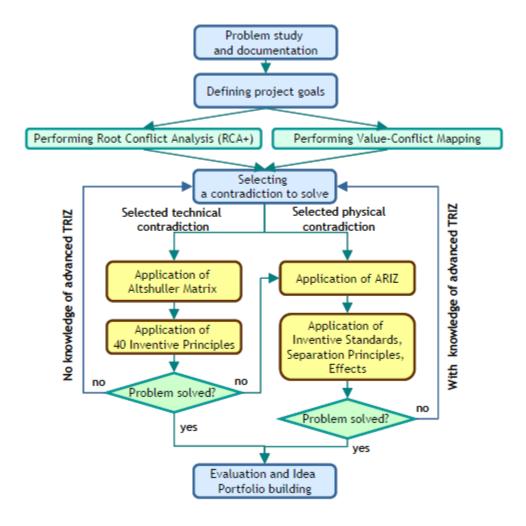


Figure 5. TRIZ approach to problem solving (Souchkov, 2013)

This process allows for the systematic generation of solutions. In this study not all tools used in TRIZ were used. For the problem analysis phase Root Conflict Analysis was used and inventive principles and -solutions for the idea generation phase. The tools that were used are described in this annex. For a description of the other tools see Souchkov (2013).

**Some important concepts**

*Ideality*
The aim of TRIZ is to find an ideal solution to a problem. An ideal solution is a solution that: has all desirable functions, only positive results, no negative effects, no undesirable function and uses no resources (Mishra, 2013). As a result of this the TRIZ philosophy does not allow for any compromises (as this would mean either the positive effects are not fully applied or the negative effects remain to exist).

### Super system, system and sub-system

In TRIZ, solutions for contradictions are sought on three levels: the super system level, the system level and the sub-system level. With the super system everything that is not part of the system itself is meant and the sub-system is a part of the system. For example for the system 'car' the road, the air and legislation are part of the super system and the steering and engine are sub-systems.

### Substance-field models

Substance-field models (or Su-field models for short) are representations of interactions between elements used. This representation depicts the interaction, its characteristics (positive, negative or insufficient) and the context in which it operates. It visualizes the interaction and is used in combination with the inventive standards.

A Su-field model consists of four elements: the first element of the interaction, the second element of the interaction, the context (field) in which the interaction takes place (e.g. mechanical, electromagnetic, legal or social) and the interaction itself. The two elements that are part of the interaction are described in by one or two words. The context field is described by a single word. In front of this an F is placed to represent it is a field. The field is connected by two straight arrows pointing towards the two elements that make up the interaction. The interaction is displayed by a single arrow that shows the directions of the interaction (usually from right to left). A straight line is used for a positive interaction, a curved line for a negative interaction and a straight dashed line for an insufficient (but positive) one. If multiple types of interactions take place at the same time (e.g. a positive and a negative one), multiple lines can be used in a single substance field model. An example of this is displayed in figure 7.
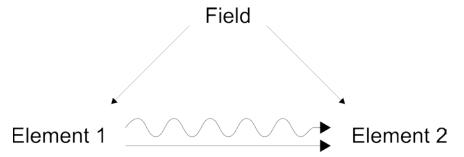


Figure 6. Substance field example 1

## Problem analysis: Root conflict analysis

Root Conflict Analysis is a technique use to structure problems aimed at finding contrations that cause the problem to exist. Contradictions are causes that result in both one (or more) positive and negative effect(s). These contradictions are than ranked (see next section) and used for the generation of solutions.

### Starting point

RCA starts of by formulating the main problem statement. The formulation of this statement should be as specific as possible. In the RCA+ diagram this main problem statement is placed in an orange box on top of the diagram with a minus sign in the top right corner. An example of a main problem statement is displayed in figure 8.



Figure 7. Main problem statement

**Different types of causes**

The analysis is started by looking at causes that underpin the problem. In order to this the question "What causes this" is asked. Multiple causes can cause the main problem statement. Causes can be displayed in three ways.

The first is a negative cause. This type of cause does not have any positive effects. As a result of this the question "What causes this?" is repeated. Again, multiple causes can underpin the negative cause. This type is displayed as an orange box (similar to the main problem statement) with a minus in the right top corner. An example of this type of cause is displayed in figure 9.



Figure 8. Negative cause

The second type of cause is the unchangeable negative effect. This type of cause is similar to the negative cause in regard that is does not have any positive effect. However, contrary to the negative cause, this type is also unchangeable. It can either be unchangeable by physical constraints, be outside the scope of the (research) project or unchangeable by the stakeholder who has the problem. If this type of cause is found that line of root problem seeking is dropped as one is not able to influence these problems. In the RCA+ diagram an unchangeable negative effect is displayed as an orange box with two minus signs in the top right corner. An example of this is displayed in figure 10.



Figure 9. Unchangeable negative effect

The third type of cause is the contradiction. This type of cause is the most important in Root Conflict Analysis. Besides resulting in negative effect(s), this type of cause also results in positive effect(s). In TRIZ the contradictions are solved and, in doing so, solve the problem. If this type of cause is found in root conflict analysis, this line of reasoning stops. However, contrary to unchangeable effects it is not dropped. All the contradictions found through RCA will be ranked using different ranking methods (see next section). In the RCA+ diagram contradictions are displayed as a yellow box with a "+/-" sign in the top right corner. They are connected with a negative cause (see above) and a positive effect (displayed as a green oval with a plus sign in the top right corner). An example of this is displayed in figure 11 and 12.
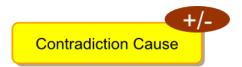


Figure 10. Contradiction



Figure 11. Positive effect

In order to determine which type of cause is found (though the question "What causes this?") two additional questions need to be asked for each of the causes found. These are "Is this unchangeable?" and "Does this cause have any positive effects?". If the answer to the first question is "yes" the cause is an unchangeable negative effect, if the answer to the second question is "yes" the cause is a contradiction (if this is the case the positive effect should also be determined and listed). When the answers to both question is negative, the cause is a negative cause. In this case the search for unchangeable negative effects and contradictions should continue.

**Connections between the causes**

Causes can be connected to each other in two different ways. The first is through an "IF" type relationship. Causes that are independent of each other are related through this type of relationship. For the solution development this means that both problems need to be solved. This type of relationship is displayed in an RCA+ diagram by a direct arrow leading from one cause to another. This is shown in figure 13.
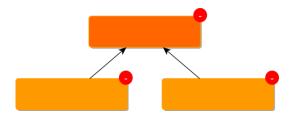


Figure 12. Example of an "IF" type relationship

The second type of relationship is the "AND" type relationship. Causes that are dependent of each other are related through this type of relationship. For the development of solutions this means that only one of the underlying problems needs to be solved. This type of relationship is displayed in an RCA+ diagram by arrows connected to an connector element which in turn is connect to the cause it result in. This is shown in figure 13.
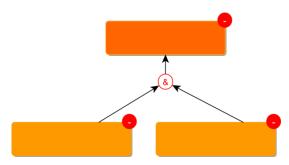


Figure 13. Example of an "AND" type relationship

**Contradictions and the main problem**

In RCA, the contradictions that are found are solved to solve the main problem. Although one or more negative causes can be between the contradiction and the main cause, solving the contradiction will automatically solve the main problem.

# Ranking techniques

**Comparative ranking**

The comparative ranking method is the most simple of the ranking techniques. It is used when problems or solutions are independent of each other by directly comparing problems or solutions with each other. This is the case in an "IF" relation. The comparison is done by creating a matrix of size n x n (with n being

the number of problems or solution plus one) in which problems or solutions are listed in the first collom and in the top row (see table 8). The diagonal of this matrix is not used as a problem or solution can not be compared to itself. Therefore crosses are placed inside these cells as shown in table 8.

Table 8.Comparative ranking example matrix 1

| | Problem number | | |
|---|---|---|---|
| Problem number | 1 | 2 | 3 |
| 1 | X | | |
| 2 | | X | |
| 3 | | | X |

The comparison is done by comparing problem 1 to the other problems (2 and 3). After this is done problem 2 is compared to problem number 3 and so on until no more comparisons can be made. The problem in the comparison that contribute most to the general problem receive a score of one and the problem that contributes less receives a score of minus one.The opposite happens in the case of solutions (the solutions that solves the problem best receives a score of 1). In case both problems contribute evenly to the problem both problems receive a score of zero. For example, if problem 1 contributes more to the problem than problem 2, problem 1 receives a score of one and problem 2 a score of minus one when they are compared. Problems 2 and 3 contribute evenly (as a result of this problem3 contributes less to the overall problem than problem 1) so both problems will receive a score of zero (see table 9).

Table 9. Comparative ranking example matrix 2

| | Problem number | | |
|---|---|---|---|
| Problem number | 1 | 2 | 3 |
| 1 | X | 1 | 1 |
| 2 | -1 | X | 0 |
| 3 | -1 | 0 | X |

After all problems are compared to each other the scores are added up to find which problem needs to be solved first (or, in case solutions are ranked, the best solution). This is the problem with the highest score. In our example this is problem 1 with a score of two (table 10).

Table 10. Comparative ranking example matrix 3

| | Problem number | | | | |
|---|---|---|---|---|---|
| Problem number | 1 | 2 | 3 | Total | Rank |
| 1 | X | 1 | 1 | 2 | 1 |
| 2 | -1 | X | 0 | -1 | 2 |
| 3 | -1 | 0 | X | -1 | 2 |

**Ideality based criteria**
The ideality based criteria methodod is based on the comparative ranking method and uses similar steps. The main difference in this method is that problems or solutions are dependent of each other, causally related or complexly related (displayed as an "AND" relationship in an RCA+ digram). This dependence does not allow for direct comparison as it is dificult to predict what will result in the best solution. However, heuristic criteria (called the ideality based criteria) can be used to estimate the expected degree of ideality. Solutions that allow for greater ideality are better than solutions that allow for a lesser degree of ideality. Four of these heurisitc criteria are identified in TRIZ: (1) involving a minimal number of components (solutions involving less components are better), (2) focussing on system elements (solutions that do not require changes to the supersystem are better), (3) easy to change (solutions that only involve changes that are easily made are better) and (4) alignment with the overal strategy of the problem owner (solutions

that are better aligned are better). For each of these heuristics, a comparative ranking is caried out and the results are added together. The contradiction whith the highest score is solved first. An example of this (using 2 contradictions) is is given in table 11 to 15.

Table 11. Ideality based criteria example matrix 1: Number of components (criterion 1)

| | Contradiction number | |
|---|---|---|
| Contradiction number | 1 | 2 |
| 1 | X | 1 |
| 2 | -1 | X |

Table 12. Ideality based criteria example matrix 2: System elements (criterion 2)

| | Contradiction number | |
|---|---|---|
| Contradiction number | 1 | 2 |
| 1 | X | 1 |
| 2 | -1 | X |

Table 13. Ideality based criteria example matrix 3: Ease of change (criterion 3)

| | Contradiction number | |
|---|---|---|
| Contradiction number | 1 | 2 |
| 1 | X | 0 |
| 2 | 0 | X |

Table 14. Ideality based criteria example matrix 4: Alignment with strategy (criterion 4)

| | Contradiction number | |
|---|---|---|
| Contradiction number | 1 | 2 |
| 1 | X | -1 |
| 2 | 1 | X |

Table 15. Ideality based criteria example matrix 5: Totals and ranking

| | Criterion scores | | | | | |
|---|---|---|---|---|---|---|
| Contradiction number | 1 | 2 | 3 | 4 | Total Score | Ranking |
| 1 | 1 | 1 | 0 | -1 | 1 | 1 |
| 2 | -1 | -1 | 0 | 1 | -1 | 2 |

**Multi-critearia decision method**
Another variation of comparative ranking is ranking using the multi-criteria method. This method is used when criteria which to evaluate the solutions are known. In this method some criteria can me more important than others. This importance is translated into a weight factor. This factor can be determined in two ways. The first option is to use a ranking system in which the range of the weights is equal to the number of criteria. The weight each criteria is given is determined by the ranking order of the criteria where the most important criteria has the highest ranking and score. The second option is to assign a value to each criterion from a specified range or numbers. These ranges consist of natural numbers. The size of the range determines the ability to distinguish differences in importance between the criteria. In this method a matrix is created with the solutions placed on the top row and the criteria in the first colon. An example is displayed in table 16. Here the ranking option was used for the determining of the weights.

Table 16. Multi-criteria decision method example matrix 1: Empty matrix

| Criterion number | Weight | Solution number | | | |
| --- | --- | --- | --- | --- | --- |
| | | 1 | | 2 | |
| | | Value | Score | Value | Score |
| 1 | 1 | | | | |
| 2 | 3 | | | | |
| 3 | 4 | | | | |
| 4 | 2 | | | | |
| Total score | | | | | |

Once the weights are determined the ranking can begin. This is done by assigning a value from a predetermined range of natural numbers based on which the solution fulfils the criteria. Here a higher value relates to a better fulfilment. This value is than multiplied by the weight factor assigned to the criterion resulting in a sub-score for each criterion. The sub scores are added to create a final score. The higher the score of a solution, the better it is. An example of this is displayed in table 17. In this example a range from 0 to 5 was used.

Table 17. Multi-criteria decision method example matrix 2: Filled-in matrix

| Criterion number | Weight | Solution number | | | |
| --- | --- | --- | --- | --- | --- |
| | | 1 | | 2 | |
| | | Value | Score | Value | Score |
| Criteria 1 | 1 | 3 | 3 | 4 | 4 |
| Criteria 2 | 3 | 4 | 12 | 2 | 8 |
| Criteria 3 | 4 | 3 | 12 | 5 | 20 |
| Criteria 4 | 2 | 1 | 2 | 3 | 6 |
| Total score | | | 29 | | 38 |

**Determining the order in which to rank the contradictions**
An order exists in which to rank the different contradictions found in the Root Conflict Analysis. While ranking, contradictions displayed lower in the RCA+ diagram have a higher priority to be compared than those higher in the diagram. Furthermore, contradictions connected through and "AND" type relationship need to ranked first before ranking contradictions connected through an "IF" relationship (when contradictions are on the same level in the RCA+ diagram). In the example diagram shown in figure 15 contradictions 2 and 3 need to be ranked first before the winning contradiction is compared with contradiction 1 as contradictions 2 and 3 are lower in the diagram.
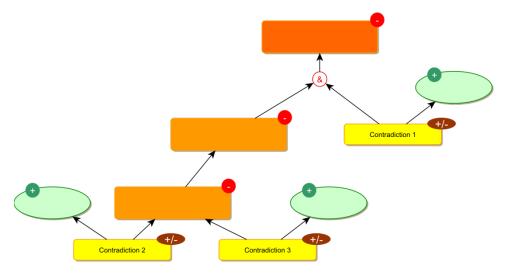
Figure 14. Ranking contradictions in a RCA+ example 1

# Idea generation: inventive principles and –standards

**Inventive principles**

### *About the method*
The inventive principles are most used in TRIZ to generate solutions. It consists of forty abstract principles which can be used to solve problems. Although it is possible to use all of the principles to generate ideas, it is better to select the most relevant ones as it saves time and results in better solutions.

### *Selecting the principles*
The principles that are relevant to the problem are selected using a contradiction matrix. In here positive and negative effects are listed in an abstract manner together with the principles that are the most appropriate to use for each combination. The formulations of the effects are the same for both the positive and negative effects and are listed from specific (e.g. weight of moving object) to more generic (e.g. complexity of control). To select the right principles, one simply selects the positive and negative effect and looks up the corresponding cell in the matrix. In this cell the appropriate principles are displayed. An example of this is shown in figure 16. Here security is selected as a positive effect and time waste, delay as a negative one. Using the matrix principles 2, 28, 26 and 9 are considered to be the most appropriate principles (in the order displayed here).

## Positive effect
### -Functional Paremeter

| Negative effect | | | Reliability / Robustness | Repairability Easiness | Security | Safety |
|---|---|---|---|---|---|---|
| | | | 35 | 36 | 37 | 38 |
| | 25 | Material waste | 10 12 35 24 | 2 14 27 35 | 2 17 12 28 | 24 19 31 5 |
| | 26 | Time waste, delay | 35 10 3 14 | 17 24 4 32 1 | 2 28 26 9 | 25 12 13 11 |
| | 27 | Energy waste | 35 40 17 11 | 1 19 30 2 | 28 3 2 26 24 | 19 4 35 31 |

Figure 15. Inventive principles example 1

### *Multiple negative- and/or positive effects and principle selection*

In case multiple positive and/or negative effects are found, the procedure for selecting the right principles is expanded. Instead of running all positive-negative pairs through the matrix and using all standards additional selection has to take place. Although it is not wrong to use all standards found this way, doing this can result in more work than is strictly needed. Therefore, the extra selection step is added. In this step the order in which the principles are listed as well as the recurrence is incorporated. Based on these two factors each principle receives a score. This score is determined by the following formula (equation 1).

Equation 1.Inventive principles ranking formula (generic form)

$$Score\ principle\ x$$
$$= recurrence\ in\ position\ 1 * n + recurrence\ in\ position\ 2 * (n-1) + \cdots$$
$$+ recurrence\ in\ position\ n * 1$$

In this formula n is the highest number of suggested principles of one of the positive-negative pairs. The four principles that receive the highest score are the most appropriate to use.

### *Generation of ideas*

The principles that are selected give suggestions about the direction of thinking in which good solutions can be found. The actual generation of ideas still requires brainstorming and creativity. However, as the abstract idea is already present in the principle it makes the process easier and points researchers/developers in the right direction.

## Inventive standards

### *About the method*

The inventive principles are the second most used method in TRIZ to generate solutions. It consists of seventy-six abstract standards that can be used to solve problems. Although it is possible to use all of the

standards to generate ideas, it is better to select the most relevant ones as it saves time and results in better solutions.

### Describing the interaction through a Substance-field
Before the selection of the principles can begin a Substance field of the interaction needs to be created. For information on what a substance field consists of see earlier in this annex.

### Selecting the standards
The selection of the principles is done by using the selection tree (see table 18). This tree helps to select the group(s) of standards that are the most appropriate to solve the problem. More than one group can be selected, in which case no further selection step needs to take place (as is the case when using the inventive principles).

Table 18. Inventive principles selection tree (Souchkov, 2013)

| Description of the problem | | Suggested standard(s) |
| --- | --- | --- |
| Create a new function | | |
| | | 1-1-1: Creating a new interaction |
| Improve effect of insufficient interaction or improve controllability | | |
| | Conditions allow for introduction of new component to a system | |
| | | 1-1-2: Introduction of new substances inside components |
| | | 1-1-3: Introduction of new substances attached to components |
| | | 1-1-4: Using the environment as a new component |
| | | 1-1-5: Using a modified environment |
| | Conditions do not allow for introduction of new component to a system | |
| | | 2-1-1: Introducing a new sub-system |
| | | 2-1-2: Introducing a new field |
| | Effect cannot be achieved by introduction of new components | |
| | | 2-2-1: Introducing a new field |
| | | 2-2-2: Fragmenting the substance |
| | | 2-2-3: Using porous substances |
| | | 2-2-4: Increasing the degree of dynamics |
| | | 2-2-5: Increasing the degree of dynamics |
| | | 2-2-6 Structuring existing substances |
| | | Group 2-3: Coordinating rhythms |
| Provide optimal action | | |
| | | 1-1-6: Using maximum action and removing excess |
| Provide maximum action under restrictions | | |
| | | 1-1-7: Redirecting action into new substance |

| Description of the problem | Suggested standard(s) |
|---|---|
| Table 17 (continued) | |
| Provide opposite effects under the same action | |
| | 1-1-8-1: Using protective substance |
| | 1-1-8-2: Using amplification substance |
| Eliminate harmful interaction between two substances | |
| Direct contact between two substances is not necessary | |
| | 1-2-1: Introduction of a new substance |
| | 1-2-2: Introduction of a modified substance |
| Direct contact between the two substances must be maintained | |
| | 1-2-3: Drawing off the negative effect |
| | 1-2-5: Using physical effects |
| Provide measurement/detection | |
| | Class 4 |
| Evolve product/system | |
| | Group 2-4: Using ferromagnetic substances |
| | Class 3: Transition to super system and micro level |

***Generation of ideas***

The standards that are selected give suggestions about the direction of thinking in which good solutions can be found. The actual generation of ideas still requires brainstorming and creativity. However, as the abstract idea is already present in the principle it makes the process easier and points researchers/developers in the right direction.

# Annex 9: Original research proposal (without annexes)

## Summary
Recognition of prior learning in the field of non-formal and informal learning has become an important aspect of the life-long learning strategy in the European Union. This increase in importance creates opportunities for providers of non-formal and informal learning to be recognized as being valuable. However, its use is still rather limited and differs greatly between member states.

Another trend in European policy is the recognition of the value youth work plays in the field of non-formal and informal learning. However, the visibility of recognition of prior learning in this sector is limited. This is partly because there is no clear agreement of what recognition of prior learning means. This project aims to develop a model to identify the various types of recognition of prior learning and the tools in them. This will be exemplified by case studies in the field of youth work. In doing so it hopes to provide a starting point for a common language in the recognition of prior learning.

## Project description

### Rationale

#### *Introduction*
This project is operating at an intersection of policy fields (recognition of prior learning and youth work). Therefore, the important trends for this project in these fields are first explained separately before moving on to the combination of them and the context of the research project.

#### *Recognition of prior learning in European policy*
In European policy, the recognition of prior learning (RPL) is seen as a step towards lifelong learning. This is especially related towards informal and non-formal learning (European Commission, 2000; 2001). Non-formal learning is the learning taking place in planned activities (eg through the setting of goals) outside formal education (eg schools) with some kind of learning support. Informal learning is the learning taking place in non-structured setting as a byproduct of all kinds of experiences (European Commission, 2013). In this context RPL refers to the provision of some kind of recognition of the learning that has taking place in these activities.

Due to rapid economical and technological changes individuals are pushed to acquire higher and more generic skills (Pool & Sewell, 2007). In order to keep up with this increasing pace, the full spectrum of learning (ranging from formal education to informal learning) has to be used (Malcolm, Hodkinson, & Colley, 2003). In order to access this spectrum RPL practices need to be integrated into traditional educational systems. Doing so enables students to obtain partial or full qualifications based on previous experiences (European Commission, 2012). Within the European Union (EU) two main problems were identified as part of an impact assessment into the state of the validation of non-formal and informal learning. These two problems are: (1) the limited opportunities and underuse of RPL practices and (2) the lack of compatibility and coherence between RPL approaches in the member states of the EU (European Commission, 2012).

Although these problems are relevant issues from a policy perspective, they are the result of other problems in the field of RPL. In European policy the notion of RPL is mainly focused on the validation of learning (Colardyn & Bjornavold, 2004). However, this notion of RPL is somewhat limited. As Smith (2004) points out, RPL can have multiple meanings ranging from credit transfer to concepts related to reflective processes of individuals. Furthermore, there is no set of definitions in the field of RPL (Werquin, 2010). Within the EU this seems to be caused by the many differences between member states (Konrad, 2010).

Moreover, this 'language problem' is not limited to the EU but appears to be a problem on a more global level (e.g. see Conrad (2008) or Smith (2004) for examples outside of the EU). Moreover, developments in this field are mainly policy driven resulting in a lack of quantitative scientific evidence of its effects (Werquin, 2010) apart from program evaluations (Konrad, 2010).

### *Youth work in European policy*

Another field that has become more important in European policy is that of youth work. Since the presentation of the White Paper on Youth in 2001 (European Commission, 2001) the importance of youth work has increased. This was shown with the declaration of youth work presented as part of the first European youth work convention (European Youth Work Convention, 2010). The declaration calls for a need for further recognition of youth work as an important provider of non-formal and informal learning and the need for a better recognition of the skills learned of volunteers and young people. This increase in importance of RPL in youth work on an EU level allows for new possibilities. This is further strengthened when combined with the increasing importance of youth work through policy and the development of qualification frameworks at a national level (ICF GHK, 2013). Furthermore, the shift in youth work from leisure based to activities focused on the education and the labour market and the professionalization of youth workers (Ibid) allows for new opportunities for RPL as well. This is beneficial for both youth workers (professional and volunteers) as well as young people.

### *Problems and opportunities in recognition of prior learning in a youth work setting*

In the policy context described in the previous sections better recognition in informal and non-formal learning settings in youth work is needed. As youth works gives young people the opportunity to develop their skills (Indecon, 2012), recognizing these is important. Especially people of a disadvantaged background can benefit from the combination of RPL and youth work as this can be the first step to some kind of formal qualification (ICF GHK, 2013). In order to do so tools have to be developed that can facilitate the RPL process. Although these tools exist already on an EU level (e.g. Youthpass (Taylor, 2011)) these are limited in use due to strict regulation. Also, as stated earlier, what is meant by RPL is not always clear and varies between RPL providers. It is therefore important to have a common framework of reference. However, a framework that encompasses the various types of RPL does not exist yet.

Although attempts have been made in this direction, models in this field mainly focus on the RPL process rather than providing a classification of the different types and tools used (see for example Duvekot, Schuur & Paulusse (2006), Scholten (2007) or Peeters (2011)). Also models focusing on various tools in RPL exist (e.g. the one of Red River College (2013)). These are mainly based on the model of Klarus (1998). However, this model is limited to the credit transfer aspect of RPL. Another type of model focusing more on various types of RPL is that of Hart, Howieson and Semple (2009). This focuses on different types of RPL but is limited to (in his case) the portfolio tool only. Although this is a popular tool in RPL (Fejes & Andersson, 2009) it is not the only tool that can be used (Conrad, 2008).

In this context the main purpose of this project is to develop and validate a model which classifies the various types of RPL used today. Doing so creates an overview which can help policy makers, RPL practitioners and youth organizations to become more aware of the various opportunities there are in the field of RPL.

Given the model is targeted at youth work organizations, the language used in the model (as well as the model itself) should be as simple as possible as these organizations are not used to RPL jargon. Furthermore, (perceived) complexity can be a major disincentive for the use of an RPL model (Fejes & Andersson, 2009) resulting in limited use. This translates in the following research questions:

1. What causes RPL to be used so infrequently in youth work in the EU?
2. What would be the characteristics of a model describing various types of RPL?

**Scientific relevance**

The scientific relevance of this project is mainly related to the modelling of the various types of RPL in youth work. As the lack of a common language in this field is perceived as the main threat to the implementation of life-long learning policies in Europe (European Commission, 2012), this project aims to provide a solution to this problem. Although models in this field exist, none of these incorporate both multiple tools and various types of RPL (see previous section).

**Intervention**

The intervention developed in this final project of the master program Educational Science and Technology is a model classifying the various types of RPL. Besides classifying RPL it should be understandable for non-RPL professionals (e.g. youth work organizations) as the intervention has to be usable by them as well.

## Research design

**Research method**

The methodology used in this project will follow a two step process which is carried out sequentially. These two phases correspond to the research questions formulated earlier. Given the lack of quantitative data in both the fields of RPL (Werquin, 2010) and youth work research (Dickson, Vigurs, & Newman, 2013) as well as the limited resources available for this project qualitative research methods will be used. The first phase will consist of looking for the root causes causing the limited use of RPL in the EU. The aim of this is phase is to provide a clear overview of these causes. Doing so results in the identification of problems which must be overcome by the models design. This will be done by carrying out a literature review. This method requires few resources while providing a comprehensive overview (Verschuren & Doorewaard, 2007). To structure this process the literature review will be combined with Root Conflict Analysis (RCA+). This tool is part of TRIZ (TRIZ (теория решения изобретательских задач, *teoriya resheniya izobretatelskikh zadatch)* is a problem solving and analysis theory consisting of multiple tools aimed at the development of inventive solutions (TRIZ, 2013)) and is aimed at structuring thought processes and clarifying problems (Souchkov, 2013) making it suitable for this situation.

The second stage will aim to design a model to facilitate a more targeted RPL approach. This phase will consist of four sub-stages. These stages all have a specific aim and different tools will be used in each stage.

The first stage is to review existing models in RPL and to provide a provisional classification for them. Doing so will identify types and characteristics of these models that can help in the design and evaluation of the model that will be developed for this project. This will be done by using a literature review of existing models in RPL. This method was chosen for the same reasons as in phase one.

The second stage will consist of the design of the model. In this phase the Algorithm of Inventive Problem Solving (ARIZ, version 85C) will be used to aid the process and to overcome mental inertia. This tool is also part of TRIZ and is specifically aimed at finding inventive solutions to overcome contradictions (Souchkov, 2013) which are the result of RCA+ analysis.

The third stage is aimed at the validation of the model and will consist of an expert review. The use of this method allows for quickly estimating the validity of the model using limited resources (Verschuren & Doorewaard, 2007). In this review expert will be interviewed using semi-structured interviews. These interviews will be done by phone/Skype. Doing so will limit the resources needed (in comparison to face-to-face interviews or an expert review in a conference setting) while allowing for a deeper insight than other tools (e.g. survey research). Interviews will serve as a basis for a write-up of what the example does in the domain of non-formal and informal learning and how this learning is recognized. These write-ups will be around two pages A4 each and will follow a template. Evaluation criteria will consist of completeness of the model (covers all types of RPL) and ease of comprehension (lack of RPL specific jargon). Criteria and sample methods used to select experts are described in the next section.

The fourth step will be a series of case studies to provide examples of the various types of RPL and various tools used currently taking placing in the youth work sector. This will be done to provide examples of how the various types of RPL described in the model are used in practice. The function of this step is aimed at showing how the various RPL concepts are used in practice. Case studies will be carried out

using the same type of tool as the expert interviews. The method of analysis is explained below. An overview of the various tools used in the various phases is given in Table 1: Tools used in the various phases of the project.

Table 19: Tools used in the various phases of the project

| Phase | Sub-stage | Main activity | Tool used |
|---|---|---|---|
| 1 | | Looking for causes resulting in limited RPL use | Literature review<br>- General RPL literature<br>- RPL in youth work literature<br>TRIZ<br>- Root conflict analysis |
| 2 | | Model design and validation | |
| | 1 | Existing models in RPL | Literature review<br>- Models in RPL<br>Classifying models |
| | 2 | Model design | TRIZ<br>- Algorithm of Inventive Problem Solving |
| | 3 | Model validation | Expert review<br>- Semi-structured interviews |
| | 4 | Providing examples of RPL practices in youth work | Case-studies<br>- Semi-structured interviews |

**Respondents and sampling**

*Sampling strategy*

This study will use criterion sampling (see Onweuegbuzie & Leech (2007) for a description of this strategy) to select the experts for this study. As the purpose of this phase is to ensure the quality of the model this sampling strategy is appropriate (Miles & Hubermans, 1994). Selection criteria of the experts are presented in the next sub section. Experts will be selected from those participated in the recent study by ICF GHK on the value of youth work. This list consists of 176 experts in youth work originating all across the EU-27. These experts are all involved in the field of youth work. Furthermore, the contact details of these experts are available to the researcher which makes them relatively easy to contact. Experts will be contacted by e-mail and phone. For a detailed description of approach methods see Annex 2: Guidance note expert review.

For the case studies a mixed purposeful sampling will be used (see Onweuegbuzie & Leech (2007)). This strategy will combine theory-based sampling and criterion sampling. The first type of sampling is often used to help researchers to develop a theory (Onweuegbuzie & Leech, 2007). This is an appropriate strategy as it corresponds with the purpose of the case studies (see how the various types of RPL are used in youth work are used and to provide examples which can aid the further development of the designed model). Additional criteria will be added to ensure the quality of the selection on the criteria as described in the next sub section. The examples will be selected for this study will come from the long-list of examples used in the same study as mentioned in the previous paragraph. This list consists of 80 examples in the field of youth work considered to be a good practice in youth work. These examples were classified as good practices in youth work by DG EAC and EACEA. To this list the participating organizations of the ROLIS project will be added. The Recognition Of Learning In Scouting and Guiding (ROLIS) project was a project aimed at developing tools for the recognition of prior learning in scouting and guiding. This project ran from 2009 till 2011 (World Organisation of the Scout Movement, 2011). In this project 8 Scout organizations participated. This is done to increase the number of possible examples. In case an example appears twice in the list (as a result of the merge) one of them will be removed. Selected examples will be contacted by e-mail and phone. For a detailed description of approach methods see Annex 3: Guidance note case studies.

*Who*

This study will use different selection criteria for the various sub steps in which data will be gathered. For the third sub step of the second phase experts will be selected who are either academically or

professionally engaged in RPL. The experts will have to be based in Europe due to the scope of this study. In case not enough Europe based experts can be found to participate experts of other continents will be considered. In order to qualify as an expert the individual will have to have at least 5 years of experience in the field of RPL. Furthermore, a preference will be given to experts with experience in both RPL and youth work.

For the fourth sub step youth work organizations that have been identified as good practices in the field of RPL will be selected. This selection will take place out of a list consisting of good practices as described in the previous section. The selection will cover examples of each category of RPL as identified in the model. Furthermore, the case studies will be evenly distributed among the various types of youth work (as identified by the ICF GHK study). This model identifies five types of youth work and is the first attempt to classify youth work in the EU-27. A further criterion for the selection of case studies is an even geographical distribution of the case studies across the EU-27. Persons interviewed should hold a key position in the organization with regard to the selected program and with regard to learning in the program (e.g. hold the function of program manager). In the case of small organizations people in charge of activities at a specific sites (e.g. site managers) or individual youth workers can be interviewed (again persons interviewed must have some responsibility for learning in the program). In case no one is available in charge of learning in the organization a staff member with more general responsibilities will be interviewed. An overview of the selection criteria for respondents in the various stages is given in Table 2: Selection criteria for the various tools.

Table 20: Selection criteria for the various tools

| Phase | Sub-stage | Main activity | Selection criteria |
|-------|-----------|---------------|--------------------|
| 1 | | Looking for causes resulting in limited RPL use | - |
| 2 | | Model design and validation | |
| | 1 | Existing models in RPL | - |
| | 2 | Model design | - |
| | 3 | Model validation (construct validity) | Initial requirement<br>1. Expert took part in ICF GHK study<br>Requirement for experts<br>2. Minimum of five years engaged (academically or professionally) in RPL<br>3. Based in Europe<br>4. Experience in both RPL and youth work (preferred) |
| | 4 | Providing examples of RPL practices in youth work | 1. Considered as a good practice by ICF GHK study<br>2. Persons interviewed hold key position in the organization with regard to learning<br>Additional requirements<br>1. All categories of the models have to be covered<br>2. All five types of youth work have to be covered<br>3. Even geographical distribution across EU-27 |

***Sample size***

The size of the samples used in this study differs dependent on the phase. In the expert review between three and six experts will take part. This varying number is the result of the fact experts are contacted in

groups of six. This is done to speed up the process of the expert review. In case four or more of these candidates do not wish to participate in the study (thus not reaching the minimum number of three experts) the selection procedure will be repeated with the number of experts contacted following the following formula: "number of contacted experts" + "number of expert willing to participate from previous selection rounds" = 6. This process will be repeated until the desired minimum number of experts (three) is reached. Doing so will make sure the total number of experts never exceeds six.

For the second step the number of case study will include at least two examples of each category in the model with a minimum of ten case studies in total. Doing so will create multiple examples for each category while allowing for an even distribution in the various types of youth work.

### Instrumentalisation

The following tools were developed for this study: guidance note for expert review, guidance note for the case studies and templates for the expert review and case study write-ups. These documents can be found in annexes 2-5. Guidance notes were drafted based on guidance notes used by ICF GHK used for similar purposes.

### Data analysis

The analysis of the quantitative nature of the interviews will be analyzed by using specialized software (NVivo, version 10). Doing so results in a quicker and more systematic analysis compared to when non-specialist software (e.g. document processing software) is used. Furthermore this allows to generate a visual overview of the data automatically reducing human error. In this software all the data (expert reviews and case studies) will be coded using a predetermined set of codes. Codes will be based on the characteristics of the various categories of the model, the types of RPL, RPL tools used and the lack of RPL jargon. Different sets of codes will be used for the expert review and the case studies. Sets of codes are displayed in Annex 6 Sets of codes used.
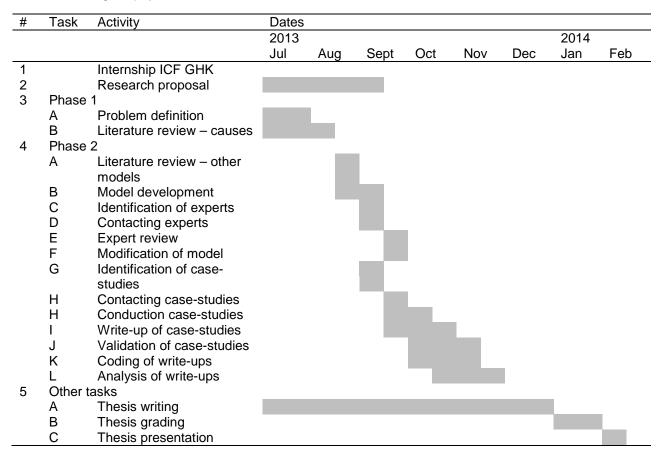
### Procedure

Data will be analyzed using the coding process as described in the previous section. Once coded the different codes will be analyzed using described methods. This will be done with the use of tables and other visual aids as much as possible to create an overview of the data.

# Planning

## Timeline

A timeline of the project is shown in Table 3: Planning final project

Table 21: Planning final project

| # | Task | Activity | 2013 Jul | Aug | Sept | Oct | Nov | Dec | 2014 Jan | Feb |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Internship ICF GHK | | | | | | | | |
| 2 | | Research proposal | ▓ | ▓ | ▓ | | | | | |
| 3 | Phase 1 | | | | | | | | | |
| | A | Problem definition | ▓ | | | | | | | |
| | B | Literature review – causes | ▓ | ▓ | | | | | | |
| 4 | Phase 2 | | | | | | | | | |
| | A | Literature review – other models | | | ▓ | | | | | |
| | B | Model development | | | ▓ | | | | | |
| | C | Identification of experts | | | ▓ | | | | | |
| | D | Contacting experts | | | ▓ | | | | | |
| | E | Expert review | | | | ▓ | | | | |
| | F | Modification of model | | | | ▓ | | | | |
| | G | Identification of case-studies | | | | ▓ | | | | |
| | H | Contacting case-studies | | | | ▓ | | | | |
| | H | Conduction case-studies | | | | | ▓ | | | |
| | I | Write-up of case-studies | | | | | ▓ | | | |
| | J | Validation of case-studies | | | | | ▓ | | | |
| | K | Coding of write-ups | | | | | ▓ | | | |
| | L | Analysis of write-ups | | | | | | ▓ | | |
| 5 | Other tasks | | | | | | | | | |
| | A | Thesis writing | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | |
| | B | Thesis grading | | | | | | | ▓ | |
| | C | Thesis presentation | | | | | | | | ▓ |

## Output

The result of the project will be the following:

- One master thesis containing:
  o A model to classify RPL practices in youth work
  o Advice for youth work organizations
- Write-ups for the expert reviews (one for each interview, total number between 3 and 6)
- Write-ups of the case studies (one for each case study, total number still to be decided with a minimum of ten)