Final report on Crocoos – *Cross-sectoral cooperation focused solutions for the prevention of early school leaving* project background research

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Content

I. Summary

„… as many as 50 percent of high school dropouts can be identified by the sixth grade"
(Iver, M. A., Mac Iver, D. J. 2009 19.)

The present report is aiming at contributing to the three yearlong project *CROCOOS – Cross-sectoral cooperation focused solutions for preventing early school leaving* which is working on the development of policy level recommendations for the creation of an early warning system tackling early leaving from education and training in Hungary, Slovenia and Serbia. Recommendations are going to be based on the one and a half year long pilot projects start in September, 2015 in the mentioned countries. The specific contribution of the current report is providing a summary of desk research on the most important aspects of a comprehensive early warning system based on European and overseas examples.

There are several reports on the social, labour market and health related reasons and consequences furthermore the individual, institutional or family related roots of leaving education before getting a final degree so that this report is not aiming at giving a full-detailed overview respectively. However it will refer to those reports and their main messages. The suggestions and highlights of the report are, of course, based on this knowledge gained from international reports and research results.

This report partially uses the information already have been gathered for an Interim report[1] in the project, about the countries suggested for study visit and their practice concerning the 6 most indicative early distress signals.[2]Furthermore it is based on a bibliography of approximately 80 elements. Additionally some study visit experiences enrich the text as well however during the upcoming months more visits in other countries will be accomplished.

Some interviews were made with experts of other relevant projects and connecting fields which results show up in the text as well.

This report is a base for an online Resource Pool which will serve as a compilation of relevant knowledge for field experts of any relevant professions, especially for teachers.

[1] Jelena Joksimovic, Juhász Judit, Mihályi Krisztina, Tomcsik Dóra (2014): *Early warning systems in six European countries.* Desk research report on study visit countries in the framework of CROCOOS– Cross-sectoral cooperation focused solutions for the prevention of early school leaving project. Interim report. Tempus Public Foundation, Budapest.

[2] More details in Chapter IV. Early distress signals of possible drop out.

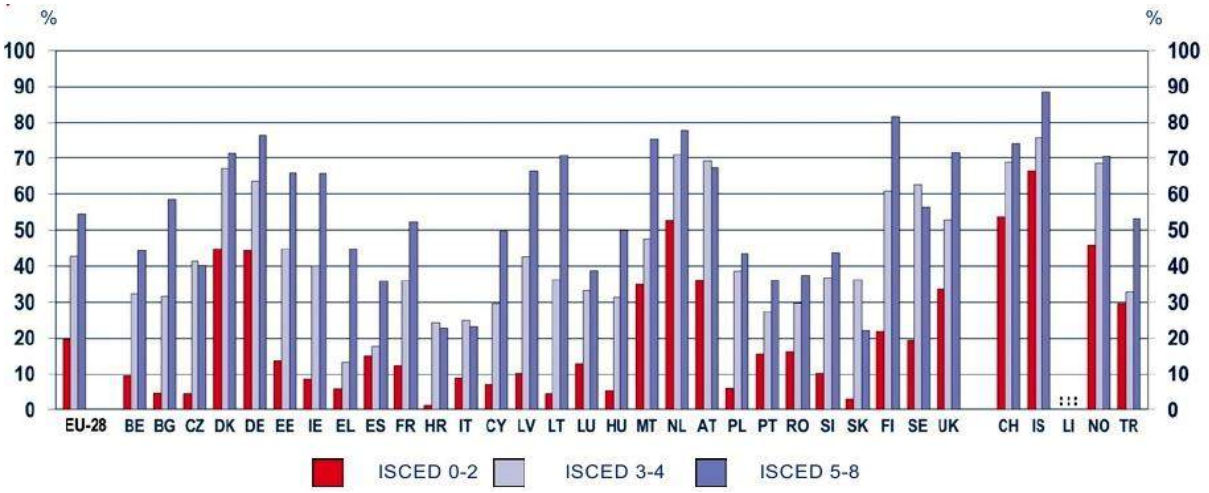
II. Early school leaving – a question of definition?

Leaving school early as a phenomenon is in the spotlight of current educational policy all over Europe, and the world; however it may refer to different aspects in each country. The EU28 ministries have accepted to achieve the goal of a level below 10% by the year 2020 while many member states have their individual national targets, along with national definitions. There are differences in the approach what is considered as the exact group of young people have to be dealt with and about the successful measures and interventions as well. It is at the same time more and more evident that early leaving is not only a status or educational outcome but usually a long-term process of disengagement that occurs over time and it can be predicted by different distress signals. The way we define early leaving from education is determent to the policy and measures that will be applied. When the focus is on the individuals' labour market position and chances for instance, interventions will target career orientation, school-workplace relationships and the transition from school to work. On the other hand, many policies try to understand the process of disengagement from education with its individual cognitive and psychological roots and processes. In the latter case suggested solutions are rather based on individual support, inter-personal relationships in school and influences of the whole learning environment (NESSE 2010 17.). In this chapter some relevant aspects of definition issues are presented along with taking stock of the most important individual and society level consequences in a nutshell.

The aspect of labour market situation

The connection between educational attainment and employability (see 1. Figure) is a cliché already in the international expert community (e.g. NESSE 2010; Eurydice-CEDEFOP 2014). The consequences of early school leaving are just as burden for the individual as for the society. Unemployment is associated with worse health condition, for instance even a higher rate of depression shown by UK data (Eurydice-CEDEFOP 2014 22.). Besides, a later entering on the labour market, achieving lower positions and paying less tax while causing extra costs for the society with possible needs for housing and life benefits are also disadvantageous for the individual and the state. "One European estimate puts the additional lifetime income for a student staying at school for an extra year at more than €70.000 (NESSE 2010 5.)." Today it is clear and widely accepted that lowering the rate of ESL is an interest of the whole society.

1. Figure Employment rates of 15-24 year olds by levels of education, 2013, %



Source: Eurydice-CEDEFOP 2014 49. (Eurostat EU-LFS)

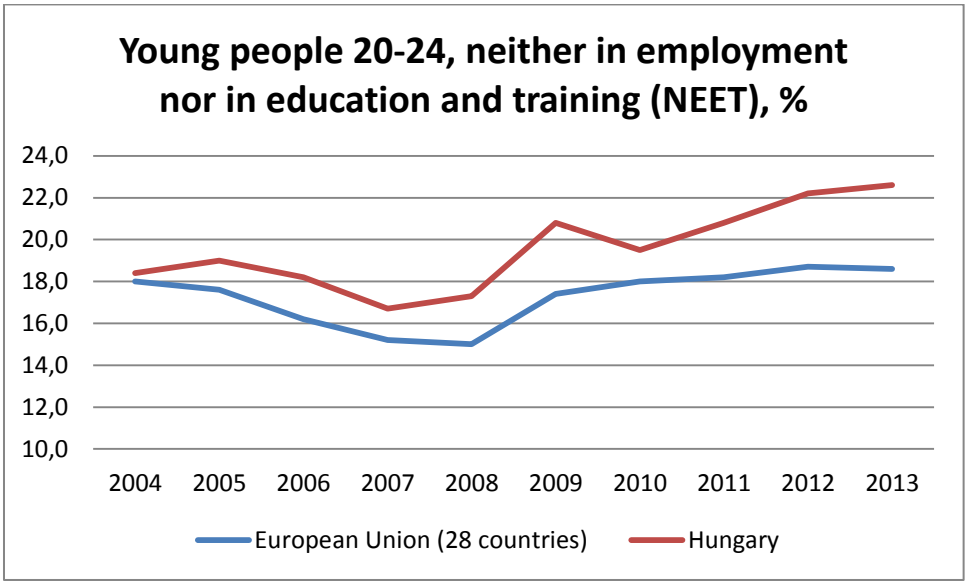
The European Union's early school leaving (ESL) definition fits to this kind of approach by focusing on 18-24 year olds with a maximum of ISCED 3c short level of education, currently not taking part in any[3] education or training – as a particularly vulnerable group on the labour market. This means that the emphasis is on the attainment of a qualification which considers good enough for some chances on the labour market. According to the Eurostat Labour Force Survey[4] (LFS) data, in the concerned population with such a low level of education the unemployment rate was almost twice as much (41%) as for the whole youth population (23.5%) in 2013.

Another employment focused definition is NEET, i.e. young people between 15-24 who are not in employment, education or training, which is for instance the national category in the UK instead of ESL for those young people who are at the forefront of policy level interventions. According to estimations in 2011 the annual loss to Member States due to labour market disengagement among young people was EUR 153 billion, corresponding to 1.2 % of GDP (Eurydice-CEDEFOP 2014 23.). See the NEET rate for the 20-24 year-olds on 2. Figure.

[3] "The EUROSTAT definition of relevant education and training beyond lower secondary education 'includes initial education, further education, continuing or further training, training within the company, apprenticeship, on the- job training, seminars, distance learning, evening classes, self-learning etc. It includes also courses followed for general interests and may cover all forms of education and training as language, data processing, management, art/culture, and health/medicine courses' (EUROSTAT, 2005)." (NESSE 2010 14.)

[4] „The European Union Labour Force Survey (EU LFS) is conducted in the 28 Member States of the European Union, 2 candidate countries and 3 countries of the European Free Trade Association (EFTA) in accordance with Council Regulation (EEC) No. 577/98 of 9 March 1998. At the moment, the LFS microdata for scientific purposes contain data for all Member States in addition to Iceland, Norway and Switzerland. The EU LFS is a large household sample survey providing quarterly results on labour participation of people aged 15 and over as well as on persons outside the labour force." http://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey

2. Figure Young people (20-24) neither in education, employment or training, %, 2004-2013



Source: Eurostat 2015

People with low level of education are three times higher possible to be NEET compared to those having a tertiary education. Migrants' situation is as well worrying: with this background they have a 70% higher chance to be NEET compared to those originated in the country. Young people with a disability or some health related problem are 40% more possibly get into NEET group too. Naturally, family background has a high influence on the chances too (Eurofound 2012).

"Where there are European examples of low rates of youth unemployment there is typically an emphasis on the importance of education systems that successfully interact with the world of work and the institutional support that young people require in order to make that transition." (University and College Union 2012 3.). Data and experience clearly show that getting at least an upper-secondary degree has a huge impact on the individual's labour market situation and therefore on the person's entire life quality.

ESL and education and the deficits of the data gathering

Recently a new expression were introduced for exactly the same group of people as ESL, sounds *early leaving from education and training* (ELET) to describe better that school is far not the only place for a learning environment. Remarkably, participation in non-formal education and training is about 12% in EU 28, however there are huge discrepancy between countries, e.g. in Denmark it is approximately 40% while in Hungary it is only 3%, for the 15-24 year olds (Eurostat 2013).

By the experiences of almost every country dropping out of education has different rate according to the programme of secondary education, to the detriment of vocational school. (Portugal seems to be an exception by having lower dropout on vocational level, then on the more academic, general secondary school level (Eurydice-CEDEFOP 2014 110.)). There is no reliable information about the exact rates by programmes though. *Early leaving from vocational education and training* (ELVET) is

measured differently country by country lack of a common measurement. The general ELET indicator doesn't contain information about the type of education and the programme from where the person was dropped out, it describes instead the current educational situation of the person.

In most cases the general problem with dropout indicator is that country level measures are not suitable to distinguish drop-outs (*measures of the non-retention or non-completion*) from cases of student mobility *(incidence of programme interruptions, continuation in another school*) – and for the secondary school programme dropout indicator is the only available measurement. In Hungary, for instance, another problem is that, school has no checkout obligation for above the compulsory age (currently 16 years old) students when they leave the school which can cause parallelism in the statistics too (Salomvári 2014).

Furthermore ELET data does not distinguish between the following cases either and considers all simply early leavers:

- those who never started an upper-secondary education programme (non-starters);
- those who started a programme, but failed to complete it (drop-outs); and
- those who actually completed the programme, but failed the final assessment (Eurydice-CEDEFOP 2014 103-104.). (*Later in this text referred as "in school dropouts".*)

Several countries use definitions that refer to the programme interruptions or the non-retention of students by measuring the occurrence of dropping out or non-completion rather than the qualification attainment (Eurydice-CEDEFOP 2014 107.). As the Eurostat category is not that elaborated concerning the exact circumstances of a dropout, alternative definitions and approaches have been appeared.

Interestingly the USA, Canada and the OECD define early school leaving in similar ways, all different from the EU definition though. About the clarity of definitions the USA is a good example for a standard, easy to follow up measure: early school leavers or dropouts are those who have not graduated from high school. This definition covers the whole country and provides an obvious goal: get young people re-enrolled and graduated if and when they drop out.
The OECD ESL focus is on 20-24 year olds with education below upper secondary education and is therefore closer to the US and Canada focus: completion of upper secondary education (NESSE 2010 13.).

<u>The PIAAC approach</u>

For getting a more detailed picture of the exact population of ELET youth the *International measurement Programme for the International Assessment of Adult Competences*[5] (PIAAC) tried to figure out the nature of ELET whether

[5] OECD, 2013. *Programme for the international assessment of adult competences – dataset.* [Online] Available at: http://www.oecd.org/site/piaac/

- early leaving is an issue of those that discontinue an on-going course or fail the final examination, rather than those never starting an upper-secondary programme; and
- drop-out events are definitive, i.e. whether those dropping out return to education and training in future periods, and how often this occurs.

The operational definitions used in calculating rates of early leaving identified within PIAAC differ from the EU measure of ELET based on the labour force survey (LFS) in three ways:

- the age group is 16 to 24 (instead of 18 to 24);
- only formal qualification is counted as current participation in education or training; and
- the PIAAC survey has been conducted in only 17 European countries.

With its obviously limited expansibility, PIAAC analysis in the 17 countries answers its questions regarding the population of early leavers. It seems that early leaving is primarily a drop-out phenomenon so that young people, out of education, with a maximum of ISCED 3c short degree have as well an interrupted ISCED 3c long or similar level upper-secondary education. Consequently, not starting upper secondary education and training at all is not really common. The same dataset proved that about one in four young persons who dropped out of a programme went on to achieve an upper-secondary educational attainment and more than half of them obtained a VET qualification, while having dropped out at one point in time.
According to its results about 30% of dropouts don't consider as early leaver as they might already have another qualification obtained before or they just continue and finish afterwards the dropout in another education (Eurydice-CEDEFOP 2014 107.).
This shows that, early leaving is a diverse phenomenon and dropout or programme interruption does not necessarily mean early leaving however both are good indicators.

National definitions

The above presented diverse aspects are reflected in the national definitions for the concerned group of youth. National definitions are related to local data collection systems and the most common level of action whether it means prevention, intervention or correction mostly.

In the national contexts ESL or ELET can mean either not having completed compulsory education or not having achieved an upper secondary certificate or the school leaving certificate (Eurydice-CEDEFOP 2014). The GHK study (2005 136-137.) presents a wide range of national definitions with their specific approaches which shows well how diverse are the country level categories. According to this report countries define ELET as a:

- Failure to complete upper secondary education (or high school) and not attending further education or training;
- Failure to gain qualifications required for participation in higher education;
- Failure to complete compulsory schooling;
- Failure to gain qualifications at end of compulsory schooling;
- Failure to participate in education or training on completion of compulsory schooling;

• Failure to gain qualifications required to access to a range of labour market opportunities;
• Failure to participate in any form of education and training between the ages of 18-24;
• Failure to participate in any form of education and training by 18-24 years olds in the period of four weeks prior to the European Labour Force Survey.

Theoretical classifications view this issue as a matter of working situation or a personality question while some are seeking for the reasons of leaving early. At the beginning of the next chapter Figure 3. shows some examples of these typologies.

Most countries use their own national definition for ELET besides the EU LFS related one, however in some countries the Eurostat definition is the one and only. Scandinavian states use only their own definitions, while in Estonia, France, Austria, Slovenia and Finland more definitions exist inside the country (Eurydice-CEDEFOP 2014). Importantly, definition has an effect on what is actually done and which target group is especially in the focus. Furthermore it influences the cooperation and approach of all actors involved in young people's education and career chances.

III. Policies and measures on system and institutional levels

"Every 29 seconds an American high school student gives up on school…" (Adaptive Technologies Inc. 2008 3.)

In Europe and also overseas many different typologies have been developed by researchers to classify students at risk or those already dropped out (see 3.Figure as an example). These approaches contribute to the preferable directions of policy measure improvements and highlight the favourable focus of intervention as they show who are the most at risk, which subgroup might be out of attention and which one can be supported with the greatest return on investment. This chapter presents some of these typologies and the most relevant measures and policies in the European context; nevertheless gives a short introduction to US policies. Besides, the role of the school and specifically, the role of the teacher in the process of becoming or not a dropout are as well highlighted.

3. Figure Different classifications of early school leaving

Classification based on the 'actual working and schooling careers after leaving school' (Dekkers and Driesen, 1997)

- successful unschooled manual worker
- school returner
- money earner
- voluntary unemployed
- enforced unemployed

Classification based on the basis of individual characteristics (Janosz, 1994)

- maladjusted, who have poor grades and who behave poorly at school
- underachievers, who just have poor grades
- disengaged, who perform better than the maladjusted and the underachievers, but simply do not like school
- quiets, who, other than having slightly lower grades, resemble graduates more than dropouts.

Classification based on young people's reasons for leaving school early (Dwyer & PRC, 1996)

- positive leaver, making a positive career choice with employment or further training
- opportune leaver, there is no definite career path, taking the opportunity to change life patterns
- would-be leaver, does not leave but reluctant to stay
- circumstantial leaver, forced to leave for non-educational reasons
- discouraged leaver, interest and performance in education is low
- alienated leaver, discouraged and non-compatible with school life.

Source: NESSE 2010 16.

The European context

In the European Union policy level discussion started intensively about 2006 in the Cluster on Access and Social Inclusion[6] with stating aims for the whole community. Many countries however have started to deal with their own dropouts and prepared national level initiatives much earlier, such as the Netherlands in 2002.[7] The *Recommendation on policies to reduce the number of students leaving education and training early*[8] is a core document for the preparation of a comprehensive strategy to tackle early leaving from education and training. Many countries did not adopt this kind of strategy yet, which covers all levels of education from primary to secondary school with general and vocational programmes, besides standing up a coordination body to link different policy areas such as education and youth, social/welfare, employment and health, however many of them have different policy level documents that support the solvation of this problem. The Recommendation promotes a more collaborative approach with the involvement of any relevant areas while it proposes the reflection on prevention, intervention and compensation levels as well.[9]

The below list shows the most important policies and measures on each level of acting identified in different countries in Europe:

On Prevention level

- Improving access to and quality of ECEC (early childhood education and care)
- Reducing grade retention
- Desegregation policies
- Positive discrimination measures
- Developing extra-curricular activities
- Increasing flexibility and permeability of educational pathways
- Inclusion of ELET in initial teacher education and professional training
- Education and career guidance

On Intervention level

- Providing individual support
- Support for low achievers
- Language support for students with a different mother tongue
- Specialist staff supporting teachers and students
- Identification of groups at risk of ELET
- Developing early warning systems for students at risk of ELET

[6] Directorate-General for Education and Culture, EU see: *Study on reducing Early School Leaving*, 2011 http://www.europarl.europa.eu/meetdocs/2009_2014/documents/cult/dv/esstudyearlyschoolleaving/esstudyearlyschoolleavingen.pdf

[7] Hermándy-Berencz Judit, Juhász Judit (2013): *Study visit to the Netherlands*. QALL project, Tempus Public Foundation, Budapest.

[8] Council Recommendation of 28 June 2011 on policies to reduce early school leaving (Text with EEA relevance) (2011/C 191/01)
http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011H0701(01)&from=EN

[9] Eurydice and CEDEFOP report (2014): *Tackling Early Leaving from Education and Training in Europe - Strategies, Policies and Measures.*

- Absenteeism management
- Networking with parents and other actors outside school

On Compensation level

- Reform of the second chance education system
- Identification of early leavers and measures to help them re-enter education and training (Eurydice-CEDEFOP 2014 57.)

The Recommendations claims that targeted support is needed to be given for the especially at risk groups of students such as:

- Students from socially disadvantaged background;
- Students from a migrant background;
- Students with minority/Roma background;
- Others such SEN (special educational needs) or special groups of students like pregnant teens etc. (Eurydice-CEDEFOP 2014 64.).

In real practice these three levels are not obviously divided the some way or anyhow, as a measure can be preventive at one time and an intervention at another time. Some of the listed are quite widespread all over the European countries such as a form of early childhood education and care or education and career guidance; furthermore sort of an absenteeism management and second chance education possibility exist in many places. Nevertheless there is no such country where all of these measures together form a system. It is important to note that, the access for services is many times not equal and consistent, for instance often to the detriment of eastern countries or parts of a country and rural areas compared with urban locations, etc.. According to the European level reports based on the analysis of many countries, the above detailed collection of measures and policy initiatives seem to be a convincing baseline for a common framework in forming an ELET strategy and tackling dropout.

<u>The USA context</u>

According to a study from 2008 there are one million new dropouts a year in the USA.[10]The country has a long history since the early 1980-s in following up school dropout and making empirical researches on this phenomenon. For this reason despite of its different cultural context it can show many examples and ideas for the improvement of European systems.

One milestone on policy level is The No Child Left Behind (NCLB) act which came into force in 2001 aiming at fostering equity and quality by using testing methods and requiring higher level Maths and Reading performance. Since the legislation every state is obliged to have an accountability system based on a model program that has been raised in Louisiana. This program has a 10 year target and a 2 yearly evaluation. It combines the achievement indicators with the attendance ones (Crain-Dorough, M. L. 2003 12-13.).The regulation is being criticised as well for even strengthening the

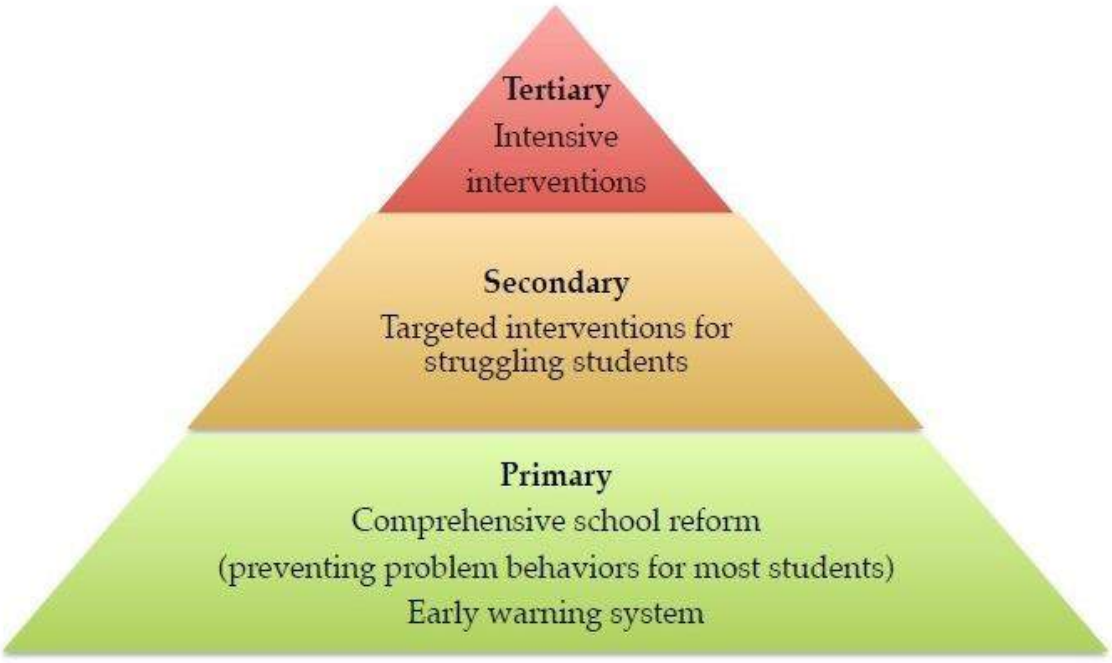
[10] Adaptive Technologies Inc. (2008): *Using Predictive Modeling to Improve High School Dropout Prevention.* White paper, USA.

process of leaving school early by making school contra incentive in keeping students that might worsen the test results (Iver et. al. 2009 The USA approach seems to be really data oriented with measures based on longitudinal research and high scales results. This has been strengthened by the NCLB law. Criticism claims that NCLB measures only cognitive skills however many other competencies, such as social or physical are required for a successful life. These so called soft skills are stated to be hardly measured scientifically, however many studies prove the opposite: social competencies can as well been measured and tested. Furthermore official tests do not count with the fact that cognitive attainment depends not only on cognitive skills but the mental and physical sate of the person or his or her motivation for instance (J. J. Heckman 2010. from 50m).

From the research side, one interesting model is by Martha Abele Mac Iver and Douglas J. Mac Iver, which can serve as a good example for an early warning system concept. They have created a three tiered model (see 4. Figure) in their study for an integrated model tackling dropout on school level. Their report shows the result of a pilot project conducted in two deprived high schools in Philadelphia. “The two middle schools yielded positive results—including double-digit reductions in the numbers of students failing math and literacy or exhibiting poor attendance or behavior—in a matter of months.”(Iver, M. A., Mac Iver, D. J. 2009 2.) The model is built up as follows:

- The primary stage, or foundation, of the prevention model involves district- and school-wide reforms aimed at providing high-quality instruction that promotes engaged learning and successful high school completion for every student. This stage includes a whole-school approach to encouraging regular attendance and other positive behaviours. These primary prevention strategies alone often succeed with a large majority (two-thirds to three-quarters) of students.
- The secondary stage targets interventions on small groups of students who need additional supports beyond the school-wide reforms to address attendance, behaviour, or academic struggles.
- The tertiary stage provides intensive intervention (often delivered one-on-one to students by specialists in social work, mental health, and so on) for the five to 10 percent of students who need more clinical support. (Iver, M. A., Mac Iver, D. J. 2009 10-11.)

4. Figure Three-Tiered Dropout Prevention Model for Districts and Schools



Source: Iver, M. A., Mac Iver, D. J. 2009 14.

The basis of their thread is the so called ABC of dropout (see 5. Figure) which has to be followed up and monitored on all levels.

5. Figure Focus of interventions concerning the ABC of dropout

Type of Intervention	Focus of Intervention (ABCs)		
	Attendance	Behavior	Course Failures
School-wide (all students)	Every absence brings a response Create a culture that says attending every day matters Positive social incentives for good attendance Data tracking by teacher teams	Teach, model, and expect good behavior Positive social incentives and recognition for good behavior Advisory Data tracking by teacher teams	Research-based instructional programs In-classroom support to enable active and engaging pedagogies Data tracking by teacher teams
Targeted (15 to 20 percent of students)	Two or more unexcused absences in a month brings brief daily check by an adult Attendance team (teacher, counselor, administrator, parent) investigates and problem solves (why isn't student attending?)	Two or more office referrals brings involvement of behavior team Simple behavior checklist students bring from class to class, checked each day by an adult Mentor assigned	Elective extra-help courses—tightly linked to core curriculum—preview upcoming lessons and fill in knowledge gaps Targeted, reduced class size for students whose failure is rooted in social–emotional issues
Intensive (5 to 10 percent of students)	Sustained one-on-one attention and problem solving Appropriate social service or community supports	In-depth behavioral assessment (why is student misbehaving?) Behavior contracts with family involvement Appropriate social service or community supports	One-on-one tutoring

Source: Iver, M. A., Mac Iver, D. J. 2009 26.

The role of school

In spite the fact that early leaving from education and training is a cumulative process, deriving from severe reasons in social, personal and institutional circumstances, there seems to be a lot to do on school level for a successful prevention or intervention. In CROCOOS project the focus is as well on schools, by testing some methods on at risk considered students and supporting teachers in their work to tackle this issue.

According to European data the quality of the school seems to be indicative considering the perspectives of its students. "Going to a predominantly low SES[11] school will depress students' average scores, while going to a high SES school will tend to raise them. The effect is that a young

[11] Socio-economic status

person -with the same mix of dis/advantages and the same history of school achievement- will leave one school early but would not leave another school early. This effect is widely noted and recognised. It is statistically significant in every country in PISA" (NESSE 2010 23. quote: Willms 2006 52.).

In a US study[12]the features of schools having low or high rate of dropout have been collected using a three-phase study based on quantitative analysis. Phase one put the focus on students and created dropout clusters. Phase two was a classification of 301 schools by the rate of actual dropouts and those at risk, based on phase one. Phase three led to 4 school categories: *consistently high dropouts schools, consistently low dropouts schools, schools more effective in dropout prevention*, and *schools less effective dropout prevention* (Crain-Dorough, M. L., 2003 13.). The study resulted in clusters for achievement and for the types of dropout as well. According to this report the characteristics of schools that have been unsuccessful with holding onto their at-risk youth include the following: "low expectations for success, inconsistent discipline, low teacher involvement and/or accountability, inattention to individual student needs, and a low level of engagement in productive learning activities" (Crain-Dorough, M. L. 2003 quote: Texas Education Agency 1989 4.). Characteristics of successful dropout reduction programs include these: strong commitment by instructional staff, quality leadership, small class size, and fair and consistent discipline that is clearly communicated (Texas Education Agency 1989). Furthermore these schools have a curriculum expanded to include personal and career components; teachers/administrators who believe the students can succeed; students who participate in the programs by their own choice; the wide availability of support services; a high amount of personalized interactions among staff and students; learning that is emphasized over teaching; and funding that is available for smaller class sizes and more equipment and resources.

The significant role of school environment is strengthened by the above detailed Iver study (*see III. Chapter)* as well. It quotes results about Chicago Public Schools indicate that students' course performance is related to three school factors: relationships with teachers, the relevance of classroom instruction to their perceived future, and teachers' cooperation with each other. Data even proves that high level of trust and personal support decrease failures while unsuccessful students hardly see teachers as helpful and motivating actors. Just as in family so in school expectations and requirements have a great effect on final attainment. (Iver, M. A., Mac Iver, D. J. 2009 6. quote: Allensworth & Easton 2007).

The role of the teacher

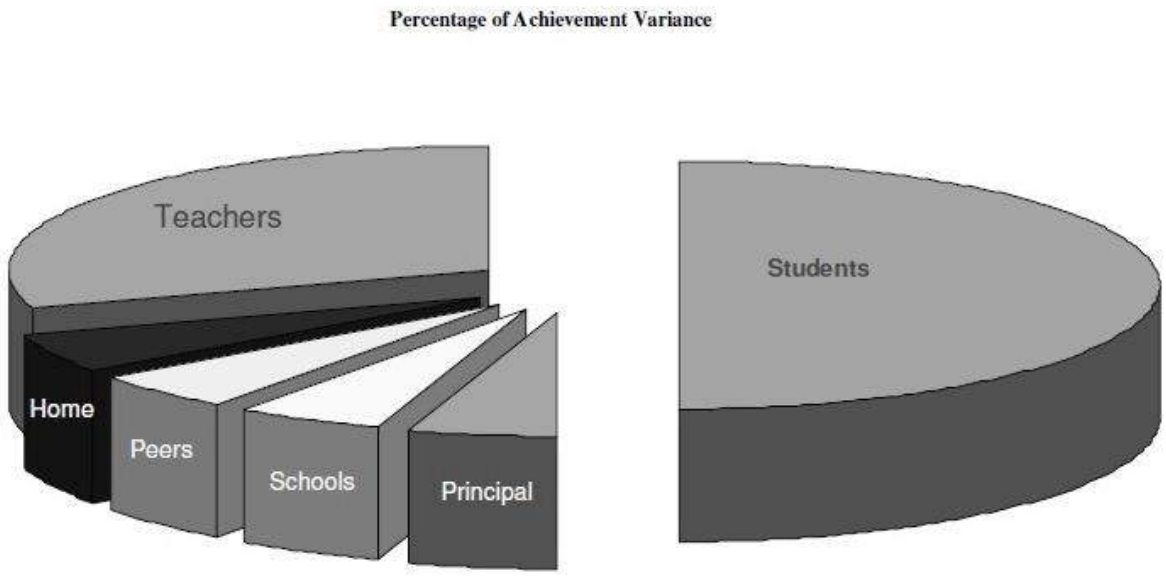
A research based on an extensive report on half a million studies and an empirical validation in US schools conducted in more than 300 classrooms, involving 65 teachers and their students, on teacher's role in educational success states that almost all things that are done in the name of education have a positive effect on achievement. The author urges however to move forward from this point and identify those attributes that have a marked and meaningful effect on student learning – not just a positive (aka greater than zero) effect (Hattie 2003 3-4.). For this reason the research was

[12] Crain-Dorough, M. L., (2003): *A study of dropout characteristics and school-level effects on dropout prevention, Dissertation*, USA

aiming at identifying the features of excellent teachers who scored higher on the National Board for Professional Teaching Standards (NBPTS) tests of excellence of teachers. To have a complete picture about excellence in school researchers involved students and conducted interviews both before and after the lesson observations with both target groups. Besides interviews they analysed lesson transcripts, scenarios and conducted student surveys too.

The results led to a profile with 5 main elements that make an excellent teacher namely: they can identify essential representations of their subject, can guide learning through classroom interactions, can monitor learning and provide feedback, can attend to affective attributes, and can influence student outcomes. These all are important factors in keeping student on track. The author concluded as well that, teachers have a much greater effect on students' learning outcomes than any other things excluding the student's personality itself (see 6. Figure).

6. Figure The percentage of achievement variance explained by teachers' role in USA



Source: Hattie, J. 2003 3.

The researcher does not state that all 'non-excellent' teachers are not good however claims that in this profession excellence is hidden and sort of unwanted to be recognised alike most of the other professional areas e.g. doctors or lawyers (for more details about the research see 6.-7. Appendix).

Beyond excellence the attitude towards students is as well important in the learning process. In a Quebec research by Potvin et. al. the aim was to explore teachers' attitude toward students' at risk: whether they have a different attitude and if that changes over time.[13] During the 3 year long longitudinal research they observed a sample of 800 students in secondary school (12 and 13 years old). 292 teachers (140 woman and 152 men) participated in the study. They used two devices to

[13] Potvin, P., Fortin L., Marcotte, D., Royer, É., Doré-Côté, A. (2001): *Teachers' attitude toward students at risk of school dropout: a longitudinal study*. Presentation, International Association of Special Education Seventh Biennial International Conference Making a World of Difference Warsaw, Poland.

measure teachers' attitudes and students' at-risk status. The TATS (Teachers' Attitude Toward their Students scale) is composed of 18 bipolar adjectives, and each of them can get a value between –3 to +3 (x 18 = -54 to +54). The student questionnaire was used to identify subjects potentially at risk of school dropout. The questions cover family and personal related issues, educational plans and school customs, teacher-student relationship and motivation for school. The higher the score in this test, the higher the risk for the student to drop out of school.
The study concluded as follows:

- Overall, attitudes are positive toward 90% of the students and seem to be steady in time.
- In general, female teachers have more positive attitudes than their male colleagues.
- Attitudes are more positive toward female students than male students and toward at-low-risk students than at-risk students.
- The more at-risk are the students,the less positive are the attitudes.

These results are in line with the notion that at risk students are not at all in favourable situation in schools (Potvin et. al. 2001 24.). Interestingly, teachers have different attitude towards students who fail from different reasons, proved by another USA research presented in the Iver report. Those who fail due to perceived lack of effort are in a better position considering teachers' reactions. Students who fail due to perceived lack of ability or other mitigating circumstances got less attention and support as teachers feel less responsibility and show "less inclination to intervene and more inclination to give failing final marks in response to lack of effort." (Iver, M. A., Mac Iver, D. J. 2009 6.).
In the Potvin study teachers' attitudes turned out to be the second most important variable after depression in students' dropout chances. Quebec researchers put the emphasis on the support of teachers to be aware of their attitudes toward at-risk students and to identify and help those who show signs of depression. The same research analysed school climate as well which has a great effect on students' motivation towards school and it is based on a good quality relationship between teacher and student. When students feel themselves good in the school, they are more engaged and tend to perform better. A key element is "meaningful social interactions" between students and teachers which has a positive influence on learning outcomes too.
In another Quebec study by Fortin et. al. teachers' attitudes towards the different subgroups have been observed as well. The core of the research was to make a more diverse and more complex typology of students at risk as, according to the researchers, previously some affected groups may have been left out of attention. The sample they used contained 810 12-13 year-old students (7 graders), about half-half regarding genders. The students studied in four different schools in Quebec. 317 students were at risk of dropping out while 493 weren't according to the Décisions screening test. They considered the socio-economic status of students too as follows: the proportion of mothers without a diploma was weighted two thirds of the index, and the proportion of families in which neither parent works full time was weighted one third of the index. One important conclusion of the report is that depressive type students are not so much in the focus of teachers so that they are might missing from the dropout risk typology as they normally cause no "problem" meaning

behaviour issues in the classroom. In the meanwhile they face usually serious family or personal problems and would highly need an urgent support.[14]

[14] Fortin, L., Marcotte, D., Potvin, P., Royer, E., & Joly, J. (2005): Typology of Students at Risk of Dropping out of School: Description by personal, family and school factors. *European Journal of Psychology of Educatio. XXI.* 4.

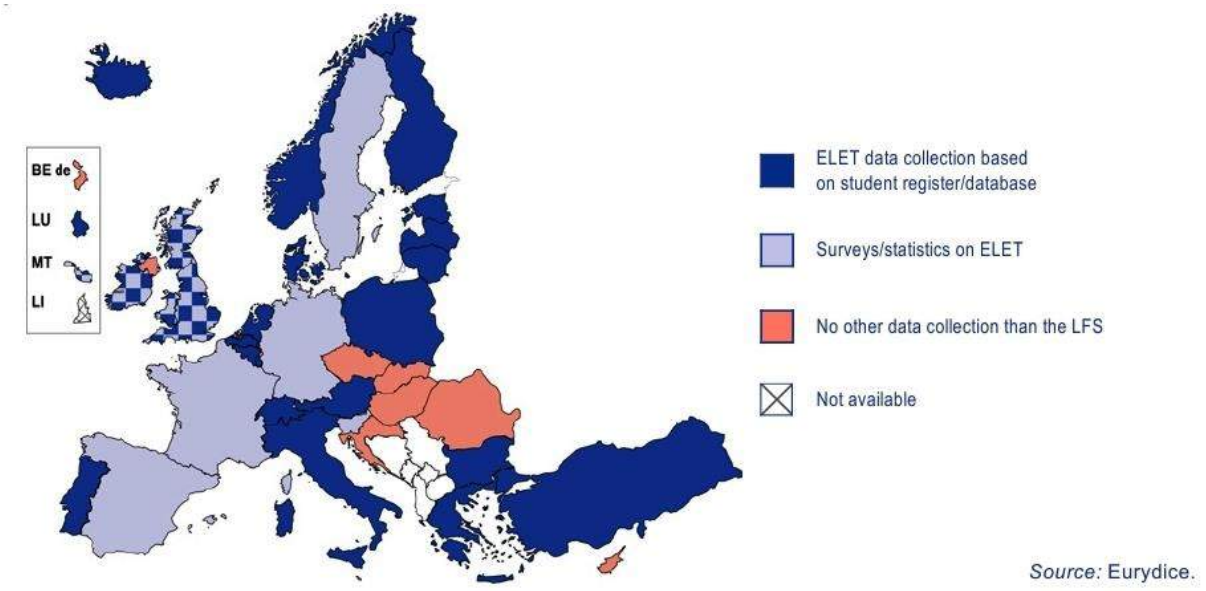
IV. Data collection to tackle early leaving from education and training

In the framework of CROCOOS project several methods and devices will be tested in schools in pilot countries followed up closely by an evaluation activity. The aim of the next two chapters is to contribute with internationally used ideas concerning data gathering and exploitation furthermore features that seem to be indicative for a risk of dropping out. A wide range of data can be seen as connected to early leaving from education and training. Quantitative and qualitative data has to be considered too as ELET is a process and has a lot to do with the individual's actual circumstances. With a preventive approach one has to be aware of the early distress signals derived from either personal, family-related, institutional or social causes.

Data-collection in Europe

As it was already mentioned above, national definitions of early leaving are closely linked to the data collection tools used to measure the scale of the problem in a country (See 7. Figure).

7. Figure Sources used for production of national data on early leaving, other than Eurostat LFS, 2013/2014



Explanatory note

Data on ELET from student registers or student databases is collected automatically from school administration systems based on students' personal data, and they can be used for an ad hoc assessment of the scope of ELET at different public authority levels. Quantitative and qualitative studies or surveys are other tools being used that can contribute to a better understanding of the correlations and reasons for ELET.

Country specific note

Czech Republic: Although there is no other regular data collection on ELET than the LFS, the National Institute for Education (NÚV) has previously carried out surveys on an ad-hoc basis providing, amongst other data, facts and contextual information on drop-outs from education (especially from VET).

Source: Eurydice-CEDEFOP 2014 28.

European countries can be divided into two groups: one using only the Eurostat data for their own as well and the other with individual, country-related data collection methods and device to map their own system. Country-related data collection can either mean surveys and statistics about early leavers and complex student registers. Most countries have a complex student database in which data specifically about early leavers are also collected. Many have a practice of regular surveys mapping up the current situation respectively. "In Malta and the United Kingdom (Scotland), for example, surveys are carried out to gather data about early leavers from education and training after compulsory education or after they have left the education system. (…), in the Czech Republic, Portugal and Romania surveys providing contextual information on early leaving and/or on the reasons for dropping out of school are carried out on an ad hoc basis." (Eurydice-CEDEFOP 2014 29.). Furthermore in some countries data collection happens at the level of individual training providers.

The uncertainty in the meaning of collected data was already highlighted in Chapter II. concerning the understanding of drop out as the non-retention or non-completion of a course or the mobility of students. According to reports monitoring of an individual trajectory happens only in Denmark, France and the Netherlands. Consequently, in other countries shifting from one training to another or interrupting a school but continuing later can also be counted as drop out.

The type of data

According to the final report of the Thematic Working Group on Early School Leaving[15] there are some essential elements of a data collection on ELET while many data is only collected by a small number of countries. Concerning ELET there seems to be a broad consensus on the following data to collect on national level:

Personal related data

- Age
- Gender
- Socio-economic background
- Education level of parents
- Citizenship/nationality
- Native/non-native origin
- Mother tongue
- Area of residence

School related data

- Grade retention
- Absenteeism
- Educational track
- Student achievement

[15] European Commission (2013): *Early warning systems in Europe: practice, methods and lessons.* Thematic Working Group on Early School Leaving (TWG on ESL), Brussels.

- Special needs
- Other

There are some exceptions from these general data gathering systems too such as Ireland for instance, where data on age is not collected. Information gathering about the student's family and social background always finds itself faced with the question of privacy and a possible misuse: where are the limits of privacy? How can experts help a student with a limited access to data and information about the young person's past? How can a system avoid that a student's data is being exposed to a misuse? These questions pop up in every country however their relevance is different according to the cultural roots of data usage in the specific place. Accessibility of data is a crucial question as well in inter-sectoral cooperation for an individual case. According to study visits and experts experiences, law would let professionals to share some individual data in case of an issue has to be solved in cooperation, however many times it did not happen due to fear of bureaucratic consequences or to insufficient relations within each actor – and this happens in many countries. Some sensitive data are not even allowed to be collected in countries such as the Roma ethnic minority background in Hungary since 1993. It is a continuous debate over this though, as some claims interventions could be better targeted in case of this exact information. In Austria, for instance, no social background variables are collected as part of student records, besides gender and mother tongue, because of concerns over data protection. In Germany, data on students' socio-economic background and living area are not available above the level of the respective Land. In Poland, the Education Information System currently in place allows only for the collection of data in aggregated form, i.e. reflecting the total number of students in each category (Eurydice-CEDEFOP 2014 32.).
Some countries gather special additional data such as the highest degree or diploma obtained or, as in Sweden, the attainment of an upper secondary level qualification. "In the United Kingdom (Scotland), information about additional support to students is included in the ELET data collection, such as being looked after (by local authorities), free school meals and the deprivation index. In Finland, other elements of the ELET data collection include information about students' subject choices; in Greece, it concerns students' subjects and grades; and in Bulgaria and Malta, information about the geographical location of the school is gathered. In Malta, there is additionally information about the educational sectors (state, church or independent schools) that students attend as well as their use of school transport available" (Eurydice-CEDEFOP 2014 31.).
In some special cases they collect data on apprenticeships, especially in Germany and Austria.

Usage of data

Countries use their data whether to support individuals and/or to monitor and evaluate their education system as a whole or to gather administrative information also about their financial situation. Most countries reported that they use data for policy making concerning ELET while only a few of them are aiming at feeding schools with information. Some answered they collect individual data specifically to support individuals better (Eurydice-CEDEFOP 2014 29.).
In most countries LFS data are collected by the national statistical bureau. Other data is served by schools for the top level educational authority which provides the collection, analysis and final

publications. In some cases middle level offices are taking part too on regional, local level, or sometimes data collection responsibilities are distributed between local and top level offices.
Data collection can happen once a year, twice a year, quarterly or monthly. The lower the level of collection, the wider the scale of aggregation. In some cases a data analysis happens once a year however a school level data collection happens monthly for example about absenteeism. In the great majority of European countries, data collected for ELET purposes is made publicly available (Eurydice-CEDEFOP 2014 34.).

Exploitation of existing data is another important, however seldom highlighted issue: in many cases states and offices collect dozens of information using only a small part of it for the amelioration or improvement of the system. In Hungary, for example, current analyses[16] showed that by the connection of already existing data bases – just in education but on different issues, could result in a solid base for an early warning system. Furthermore educational data could be connected to other sectors such as employment data about adult learners, health data connected by the health identification number to see dropouts' health features, social system data to have a much deeper insight in the social background of these students and even settlement data for the mapping of locality related reasons and consequences.

Tangible examples for the direct feedback for school derived from data gathering are described in a US research. According to the Iver report (*see III. Chapter.*) gained data are used directly as an input for teachers' work in the US. "Classroom teachers receive a report, generated from data collected by schools, summarizing information for all of their students. The report includes data on each student's:

- Attendance (prior year attendance, attendance so far this year)
- Behavior (number of negative behavior comments on the report card for the prior quarter)
- Course failure (math grades for the prior two quarters, literacy grades for the prior two quarters)
- Reading level and math and reading proficiency scores (from the most recently available information)" (Iver, M. A., Mac Iver, D. J. 2009 18.).

Another crucial example for a direct exploitation is the Talent Development Program at Johns Hopkins University, the Philadelphia Education Fund, and the School District of Philadelphia. In this case teachers and administrators are alerted directly as soon as students began to demonstrate risky behaviours. On this process they rely on the following data:

- Data on early warning indicators (every student's attendance, behavior, course failure, reading level, and math and reading proficiency scores)
- Meetings of school staff teams to discuss students, plan, and update interventions for students with early warning indicators

[16] Salomvári György (2014): *A lemorzsolódás kutatás módszertani lehetőségeinek feltérképezése a köznevelési információs rendszer nyilvántartásai alapján*. Elemző tanulmány, Oktatáskutató és fejlesztő Intézet, Budapest.

- A “second team of adults” to assist with interventions for at-risk students (Iver, M. A., Mac Iver, D. J. 2009 2.).

Having an insight into European and overseas examples it seems general to have some kind of a data base about students’ behaviour and social circumstances however many problems still remain unsolved. The best exploitation of data for instance faces itself with data protection and security issues, nevertheless with the inappropriate cooperation of different sectors. Positively many good examples exist, that can be advantageous for countries with fewer experiences. One of the most important conclusions is that any kind of data gathering and the usage of this information have to adapt to the local situation and for those who work in the specific system.

V. Early distress signals of possible dropout

Despite the fact that many studies report about features that predict the possibility of a later dropout safely, distress signals are partially a matter of approach. These signs show when a student is at risk, though, the actual dropout happens only in case of a set of simultaneous events (see 8. Figure as an illustration for this complex process). It does not mean that this sign makes it inevitable to drop out of school. Being at risk means that the student has a problem with he or she cannot turn to anyone. If it was the opposite, the student should not be a dropout simply because of the presence of the difficulties. Basically distress signals are those features that cannot be dealt with current educational system.

8. Figure Factors of disengagement

School Factors	Curriculum Factors	Family factors	Individual Factors
Teachers lack skills to work with disengaged students	Perceived irrelevance of curriculum	Education not valued – limited support to remain in school	Issues with self-esteem, confidence, social skills, coping skills and resilience
Lack of training opportunities for teachers	Prescribed academic curriculum	Absence condoned by parents	Negative experience of school including discrimination, academic failure and transfers to lower level of education
Lack of educational resources and support staff	Lock in to inappropriate vocational/academic courses	Household problems, processes and dynamics	Relationships with peers: • Outsider/loner/bullying • Friends beyond school attracting out of school • Alpha female/male – high degree of autonomy, behaviour problems and actively influencing others' disengagement • Colluder/disputant – non-attendance influenced by truanting peers
School admission policies	Reduction in pastoral time as a result of curriculum pressure	Contradictory social, behavioural and cultural expectations	
Lack of supportive pastoral systems	Inappropriate pedagogy – focus on curriculum content rather than learners	Expectations of assumption of adult roles and caring responsibilities	
Insufficient career advice and guidance	Incompatible learner and school norms		
Teacher/pupil relationships	Lack of alternative education provision with formalised accreditation		Lack of academic ability, special educational needs and difficulties in coping with traditional assessment procedures
Low status of vocational education			Boredom, alienation, discouragement, Health problems including mental, health problems leading to absence and substance misuse

Adapted from Ferguson et al, 2005, Kendall and Kinder, 2005 and ReStart, 2007

Source: NESSE 2010 26.

What signals can be identified?

In an earlier phase of the research an interim report was provided with a focus on the countries (Poland, Berlin, Germany, Lithuania, Sweden, UK, Ireland) that were suggested for a study visit. The report is based on a desk research which presents these countries' practice to handle the most relevant early distress signals. These signals were identified by the Thematic Working Group Report[17] and additionally validated by the expert group of the CROCOOS project. Inevitably it is a narrowing approach with the intention to focus on those that can be easily observed in schools during a short period of time. Furthermore the aim was to find the ones that might have documented good-practice solutions already to use these examples in the improvement of the toolkit for the pilot project. Nevertheless it is a crucial element of the project to build on the already successful local methods and focus on the locally important problems.

These signals are:

I. signals connected to official standards

1. Absenteeism
2. Decreasing achievement
3. School year repetition (*note: depends on the system of each country*)

II. signals connected to behaviour

4. Being bored in the classroom (low motivation)
5. Drastic behavioural changes (aggression, introversion, rhapsodic behaviour)
6. Bullying (both sides)

The main outcome of the interim research was that an early warning system can be part of the mainstream or a separate system, and there is no such a country where a totally complex system exists. However there were some very tangible examples for tackling ELET in the observed countries. Another wider conclusion is that these signals seem to be very international, even beyond Europe. A USA researcher even claimed that an early warning system can be predictably built on only the three following features: Math course grade, English Language Art course grade, and attendance rate (Uekawa, K. 2010). Although taken into account local differences and particularities, main features of an early school leaving seem pretty predictable.

Some signals in details

Absenteeism, especially unjustified considers a very important signal as it is very easy to be followed up and identified so that policy level measures are easier to be built on it than other, more complex or less tangible features. It is an overall monitored and strictly followed up measure as well, furthermore national regulatory environment usually has a detailed part about the consequences of non-attendance which many times covers financial issues too. An American research came out with

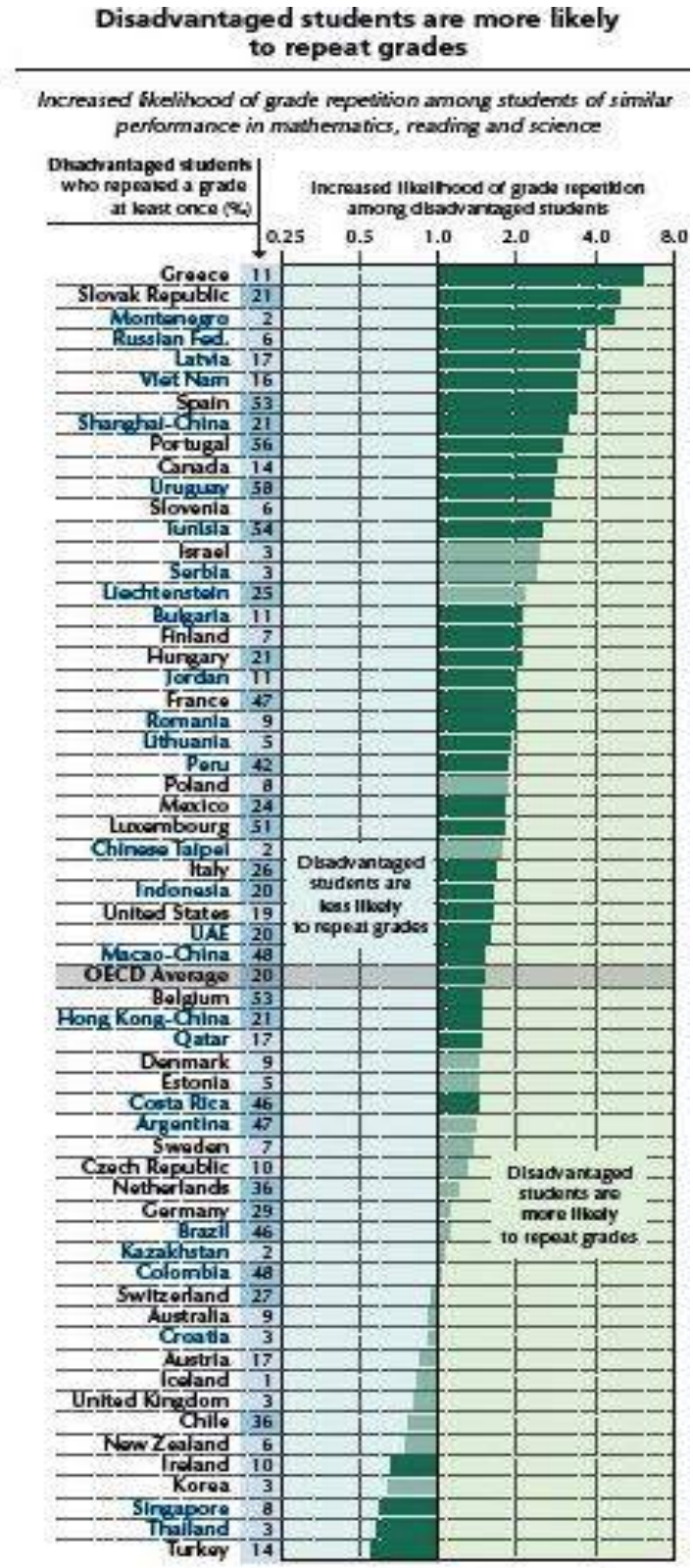
[17] Reducing early school leaving: Key messages and policy support Final Report of the Thematic Working Group on Early School Leaving November 2013

really elaborated results about school absence not only in cumulative manners but the time when it happens. It states that first year rates of absenteeism are highly predictive for later school completion. According to its evidence only 1 or 2 weeks of absence during the first semester of high school are associated with lower rates of graduation (Allensworth & Easton, 2007). It even goes more detailed claiming that the number of absences during the first 30 days of high school is one of the most indicative signals (Heppen, J. B., Bowles Therriault, S. 2008 3.).

Low level of **grade retention** for example seems to be an important method to support students' motivation or at least not to take it away. This can be found in some countries, not in all of them though. Its importance is strengthened by the studies as well: "A systematic review of seventeen studies examining factors associated with dropping out of secondary school prior to graduation confirms that grade retention is, in fact, a significant predictor of school dropout (Jimerson, Anderson, and Whipple, 2002). It is perceived by students as an extremely stressful life-event, which negatively affects their self-esteem (Anderson, Jimerson and Whipple, 2005) and thus increases school failure, high-risk behaviour and the likelihood of leaving early (Field, Kuczera and Pont, 2007; Rumberger and Lim, 2008)" (Eurydice-CEDEFOP 2014 43.). Grade repetition is as well problematic, as practically it is used as a form of punishment instead of a supportive method to help slower students.[18]"According to results from PISA 2012, 12% of 15-year-old students across OECD countries reported that they had repeated a grade at least once during their compulsory schooling: 7% of students had repeated a grade at least once in primary school, 6% of students had repeated a grade at least once in lower secondary school, and 2% of students had already repeated an upper secondary grade, even though 15-year-olds have generally just begun their upper secondary education. Grade repetition is a costly way of handling underachievement: retained students are more likely to drop out, or to stay longer in the school system and spend less time in the labour force. As a result, some countries that had used grade repetition extensively have rejected that policy in favour of more intensive early support for struggling students. Grade repetition offers no clear benefit to the overall performance of a school system; and because, as PISA results show, socio-economically disadvantaged students are more likely than advantaged students to repeat a grade (20% of them, while 7% of advantaged), grade repetition may also reinforce inequities in the system" (PISA in Focus 2014/09; see 9. Figure).

[18] PISA in Focus (2014/09): *Are disadvantaged students more likely to repeat grades?* http://www.oecd.org/pisa/pisaproducts/pisainfocus/pisa-in-focus-n43-%28eng%29-final.pdf

9. Figure Disadvantaged students and grade repetition measures



Source: PISA in Focus 2014/09

A **longer general path** in education appears in many countries with different implementations. This – the nine-year-long general education – produced significant amelioration in Polish system between 2000-2006 (Joksimovic, J., Juhasz, J., Mihalyi, K., Tomcsik, D. 2014 6.), and it is even 10 year in Lithuania and somewhat in Germany too, as the real path choice has to happen at the end of 10th grade. However the one year longer system alone is not a proper solution: the transformation has to happen as part of a curricula and structure reform. In Poland for instance, there is a 6-3-3 year system where each level has its own input and output criteria and evaluation. They restructured curricula as well and adopted it to a different approach.

Career orientation is a crucial element of a good career choice. It is proved that in many cases wrong choice leads to dropout. In Germany for instance it happens with the strong involvement of companies which makes students' experiences really tangible and live. In the Netherlands it is part of the period when a student has difficulties and plans to change profession. Many empirical researches strengthened the importance of a good guidance, also those, that has been conducted among students themselves.

In the UK English as a second language is proven to be a strong predictive factor, so that **language support for migrants** is as well important in any countries with such a minority. Outcomes in the national language and literature subject are under all conditions a strong predicting factor. This has been proven by many overseas studies and European as well. Result in Maths has a similar reliability considering the possibility of dropout.

There are severe programs against **bullying**, started in Sweden providing a model for every other country. "According to a research carried out by Theme Group Youth in 2012 the foremost reason for dropping-out from school is bullying." (Joksimovic, J., Juhasz, J., Mihalyi, K., Tomcsik, D. 2014 42.). They started serious research on this theme in 2009 and prepared methods to tackle this behaviour differently for girls and boys, involving the whole school community, building on the central participation of students themselves too. It has a lot to do with school climate which of course has an effect on many other aspects of life in school.

The presence of **other specialists**, such us school psychologists or counsellors, peer helpers or teachers for special educational needs, means a meaningful support for teachers in handling specific students.

The age limit of **compulsory education** seems to be the longer the better however it does not necessarily mean sitting in the school until 18. In the UK for instance it can either mean participation in an apprenticeship programme or full time work with part time education or training programme.

In Ireland and in the UK there is a separate system almost like a comprehensive early warning system. They have a **special board** dedicated to monitor for example student absenteeism and schools have to prepare yearly report about this issue. In the English model there is RONI – risk of NEET indicator following the characteristics of post-16 drop outs on current 9th, 10th graders.

About **boredom or low motivation** in school not so many reports or written materials can be found for the examined countries. The Irish model is rather interesting as they officially observe the

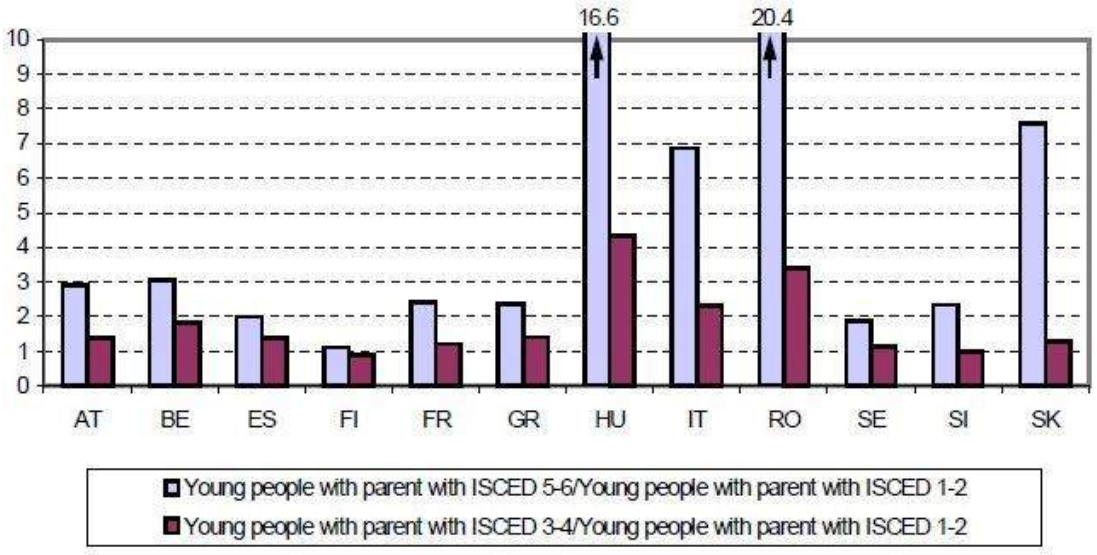
following too as a signal of at risk: “Unwillingness to go to school, refusal to attend, truancy, deterioration in educational performance, loss of concentration and loss of enthusiasm and interest in school are all recognized as signals for student who is bullied and in possible risk of ESL” (Joksimovic, J., Juhasz, J., Mihalyi, K., Tomcsik, D. 2014 27.). According to our research these sort of softer signals are less widely recognized in Europe yet. In the USA and Canada however there are longitudinal researches for decades about the psychological aspects of dropout.[19]

Naturally there are plenty of other early signals that can be indicative for the possibility of a later dropout, so that in the second part of the research we have also been focusing on these additional signals.

Other signals and reasons to leave the school early

Most of the signals are not even behavioural or attainment related but “brought from home”. For instance, parents’ educational level has a very important impact on future chances, proved besides many others by Iannelli’s study which observes country differences in this aspect. The author based the conclusions on twelve countries examples using EU LFS 2000 ad hoc module data about school-to-work transitions. The relative advantage of having parents with upper-secondary or tertiary education in reducing the chances of early leaving is strongest in the Eastern European countries (with the exception of Slovenia) and smallest in the Nordic countries (Sweden and Finland) (see 10. Figure) (Iannelli 2002 10.).

10. Figure Odd ratios of graduating from tertiary education by educational level of parents

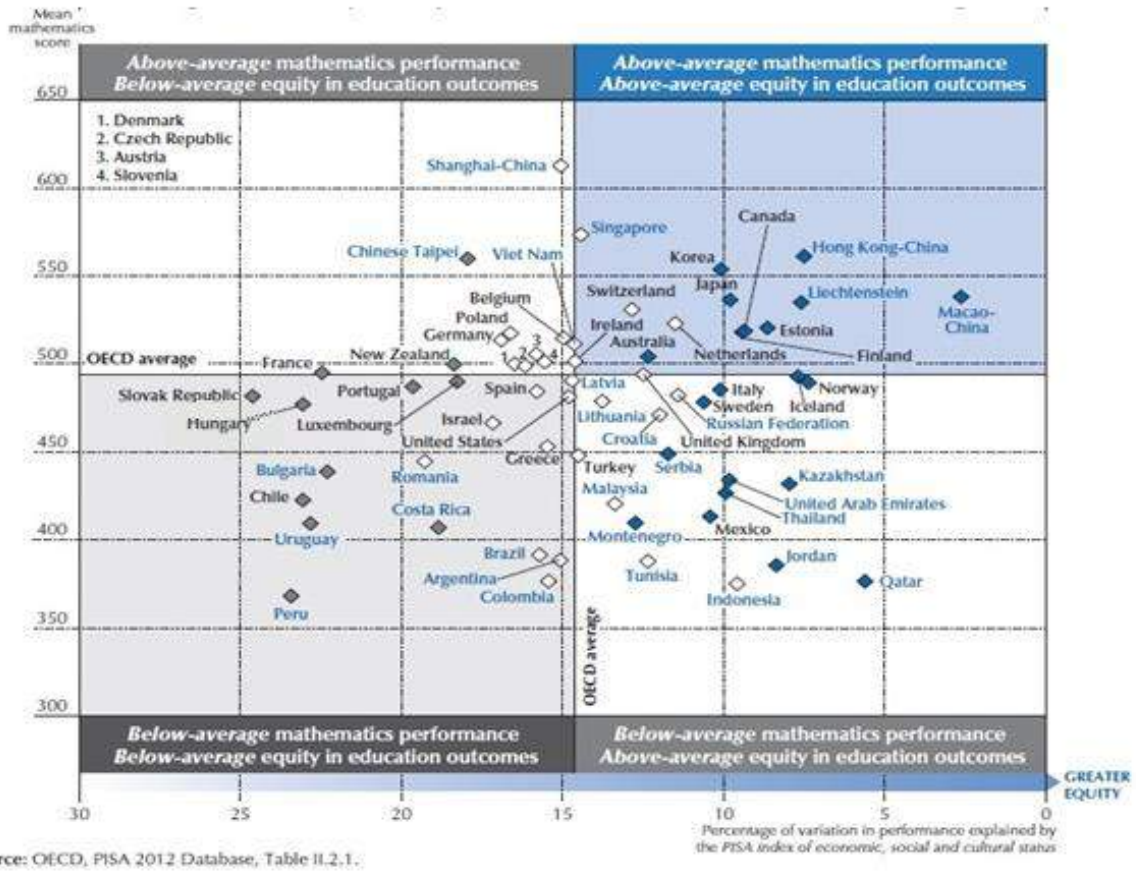


Source: Iannelli 2002 12.

[19] I.e. Crain-Dorough, M. L., (2003): A study of dropout characteristics and school-level effects on dropout prevention, Dissertation, USA. Potvin, P., Marcotte, D., Fortin L., Royer, É., Leclerc, D., Blondin, D. (2002): A comparison of dropout students, at risk students and regular high school students, Université du Québec à Trois-Rivières, Trois-Rivières, Canada; Université de Sherbrooke, Sherbrooke, Canada; Université Laval, Québec, Canada; Université du Québec à Montréal, Montréal, Canada, 63rd Annual Convention of the Canadian Psychological Association University of British Columbia, Vancouver.

Education should however compensate these disadvantages derived from the socio-economic background instead of preserving or even strengthening social inequalities. According to an OECD research some countries are far from an equalizing system (see 11. Figure).

11. Figure The correlation of socio-economic status and performance in school, OECD, 2012

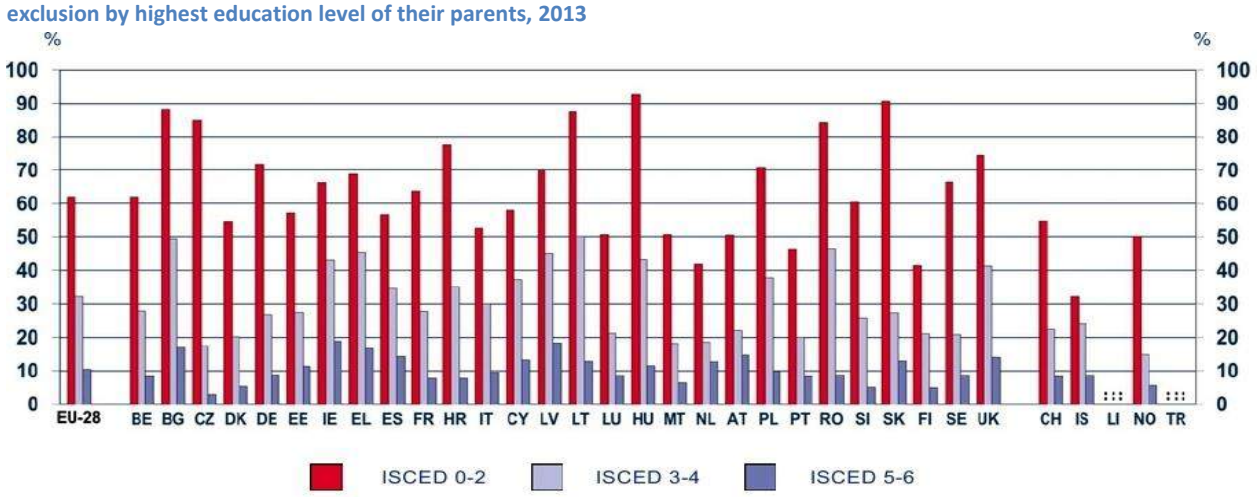


Source: OECD, PISA 2012 Database, Table II.2.1.

Many EU level and national research proved that **socio-economic status** (SES) has a determining effect on early dropout, specifically students with **early school leaver parents and unemployed parents** are at a great risk (e.g. Eurydice-CEDEFOP 2014; see 12. Figure). The level of **education of the mother**, in particular, is associated with a higher risk (Nevala et al. 2011). This finding has been confirmed by a study carried out in Croatia (Eurydice-CEDEFOP; 2014 36. quote: Feric et al. 2010).

12. Figure Percentage of children aged 0-17 at risk of poverty or social

exclusion by highest education level of their parents, 2013



Source: Eurydice-CEDEFOP 2014 37.

In the light of these statistics **socio-economic status** seems to be the most important predictive factor above all considering those features brought from home. Besides that having a **migrant origin or a minority background** with language and/or cultural difficulties is a risk factor so as male **gender**: they are twice as much at risk as females. In the EU, 16.9% of boys are early school leavers compared to 12.7% of girls. In all countries with the exception of Bulgaria and Romania, boys are significantly more likely to be early school leavers than girls. At the same time, reductions in rates of ESL have been faster for girls than for boys (NESSE 2010 15.).

Nevertheless migrant status and gender has no effect alone, just with a socio-economically low level status. Some school related factors seem to be indicative as well such as **grade repetition practice**, **early tracking** and **socio-economic segregation of schools**. On the contrary a good quality **early childhood education and care** (ECEC) has a preventive effect. According to PIRLS[20] 2011, the more time a child spends in ECEC, the better their reading results (Mullis et al. 2012; European Commission/EACEA/Eurydice 2014 47.) Additionally a smooth transition from lower secondary to upper secondary level can save many from becoming an early leaver. **Flexible pathways and transition support system** are both important factors too in avoiding dropping out related to wrong career choice. Numerous interviewees discussed issues related to students' inadequate orientation as one of the reasons for dropping out (Eurydice-CEDEFOP 2014 114.).

Labour market has as well an important role in the whole process with its push and pull factor in a complex way. However students in a younger age usually do not consider their future job perspectives, rather their current feelings and well-being in a certain school.

Data collection on different levels in the light of US researches

[20] "For the past 15 years PIRLS (Progress in International Reading Literacy Study) has measured trends in reading comprehension at the fourth grade. First assessed in 2001, PIRLS has been on a regular 5-year cycle since then. Most recently, PIRLS was expanded in 2011 to include prePIRLS, which is a less difficult version of PIRLS." http://timssandpirls.bc.edu/pirls2016/framework.html

"Schools that place too much emphasis on achievement alone as a means of being "effective" may alienate their lower achieving students or force them out of school" (Crain-Dorough, M. L., 2003 10. quote: Wehlage & Rutter 1986).[21]

A company in the USA has examined the most important distress signals in Louisville as part of a pilot project of their innovative early warning system.[22] They identified absenteeism, academic achievement, grade repetition, gender, programme, specific school, withdrawal code and a special membership in a programme between school and local employers for students at risk. After all they identified that transition between different school programmes is the most risky period so that flexibility and career advisory are important elements for supporting and saving students.
In the USA dropout is in the scope of interest since the 1980-s.[23] Many typologies, risk factors and successful interventions revealed as an evolution of ideas, building on each other's results. There was an interesting category by Kronick and Hargis (1998), the 'in school dropouts', those who go through the whole education period but fails on the final examination.
Goldschmidt and Wang (1999) identified a sibling with a dropout event as an additional risk factor to the common list of indicators. They observed as well that most of early leavers have a C level achievement, which means that **not only the very low performers drop out**.

In the Louisiana pilot grade repetition and being overaged had the highest indication in dropping out, above ethnicity, poverty and all other so that the suggested preventive technics has to focus on these two.

Potvin et. al. in 2002 presented their results building on the outcomes of an empirical research identified the most indicative features that distinguish at risk and already dropout students from regular ones. They worked on a 275 element sample for 5 year long. Participants were 8-10-12 graders. Three groups were formulated with regular students, students that have been considered at risk and those already dropped out. They used the already mentioned Décisions test (*seeIII. Chapter*) to identify each groups and then made a comparison of each group members' chances on school, family and personal levels.
They observed variables related to personal, family or school. They have found as follows results on different levels:
Personal variables

- Depression – seeking support, positive reappraisal, avoidance – behavioural disorder (externalization, internalization) - delinquency.
- At risk students perform better in Mathematics and French than dropout students.
- Depression, avoidance, marks in French and Mathematics decreased, while delinquency increased over the grades 8, 10 and 12.

[21] Crain-Dorough, M. L., (2003): *A study of dropout characteristics and school-level effects on dropout prevention, Dissertation*, USA
[22] Adaptive Technologies Inc. (2008): *Using Predictive Modeling to Improve High School Dropout Prevention.* White paper, USA.
[23] Crain-Dorough, M. L., (2003): *A study of dropout characteristics and school-level effects on dropout prevention, Dissertation*, USA.

Family variables

- Parental style for regular students differs from at risk and dropout students on warmth/acceptance – parent/teen communication – affective support.
- Family climate for regular students differs from at risk and dropout on cohesion – conflict – order and organization.
- Family conflict scores are higher for at risk and dropout students than for regular students.
- Parental warmth, affective support and communication with their teen, family's cohesion, conflict and order/organization changed over the period.

School variables

- Regular students show higher scores for involvement – affiliation- teacher support – order and organization and rule clarity than at risk and dropout students.
- Teacher-student relationship presents the highest scores for regular students, with moderate but significative scores for at risk students and particularly low scores for dropout students.
- Perception of teacher support, rule clarity changed over the high school period, while teachers' attitude becomes increasingly negative (particularly for dropout students).

(Potvin, P. et al 2002 13-15.)

This study is especially rich concerning softer personal and family related features that might lay behind a student's dropout. In CROCOOS project perspective these very concrete symptoms and indicators seem to be worth to consider as the pilot project environment in schools with small group of students and teachers means a solid base for observation.

Less widely observed distress signals

The already mentioned (*see III. Chapter*) three-phase Crain-Dorough research in the US with the 4 school categories by dropout probability has provided a comprehensive analysis on the personal and psychological aspects of being at risk of dropping out.[24] An interesting finding is the role of so called *locus of control* (defined by Rotter in 1966) which „is the extent to which an individual perceives that an event occurs due to one's own actions (internal locus of control) or due to luck or chance (external locus of control)"(Crain-Dorough, M. L. 2003 34.). Other researchers identified that as a significant predictor of academic success. Those that put this locus outside have a higher chance to leave school early.

Self-perception is as well an important factor as it might became more positive after dropping out of school when the environment outside of school provides more opportunities for status attainment than the school. It has a huge significance in understanding the decision behind not coming to school any more.

Feelings of alienation and cultural mistrust appear as well among students which can be changed by counselling programs, career orientation with the involvement of employers.

An interesting finding of US research was in connecting with smoking. Using *cigarette* during the seventh grade predicts dropping out of high school even after controlling for demographics, family

[24] Ibid.

structure, academic orientation, early deviance, and school environment for Asians, African-Americans, and Whites, but not for Hispanics. For Hispanics, early marijuana use predicts dropping out of school instead. This much elaborated results can serve as a checklist for teachers to watch out; however it cannot replace individual care and attention.
A surprising result came out of research considering *pregnancy*. According to data adolescent childbearing has no effect on dropping out of high school in the US when underlying socioeconomic factors are taken into account.
Nevertheless ELET is not the exclusive problem of children in poverty. The American expert uses the expression of Non-traditional dropouts for those middle-class students facing serious problems other than poverty. They usually show serious behaviour disorders, they face family dysfunction, and have psychiatric disturbances, family patterns of substance and child abuse, and family breakup, also abuse disorders, conduct disorders, and adjustment disorders – teachers and professionals observed.

James J. Heckman[25] observed the issue of dropout from another perspective analysing data about cognitive and non-cognitive skills. He found that cognitive skill results of dropout and non-dropout students are the same, however their *social skills* are much weaker. He stated that, controlling on skill results Afro-American and Hispanic students, even in poverty, have a higher chance to get into college than Native Americans, despite the fact that altogether they are below-represented in higher education. It strengthens the notion that social skills are way more important than one might consider. It has a lot to do even with results on cognitive tests considering motivation or well-being as factors.

Which is the biggest group of students at risk?

Fortin and colleagues (already presented in III. Chapter) made a typology[26] of dropout students based on the three main sources of being at risk: personal, family or school related. Fortin et al. (2005) showed that seven factors were the best predictors of a student's dropout status: depression effects, low family cohesion and organisation, low student involvement, negative teachers' attitudes, low performance in mathematics and French. Their studies strengthened the main signals already detailed above however added some more based on a wider perspective. For example students who do not value academic success or adhere with school values, or have high anxiety or depression are as well at risk and should be supported. These researchers believe that, family circumstances are strong predictors of later dropout. Beyond the economic difficulties of a family there expectations towards the child and their so called poor parenting practices have their consequences as well.
On school level the most important is teacher-student communication; furthermore the organization of a classroom and task orientation stimulated better the students' performance. They stated interestingly about rules that whether they are too extensively in focus, or unclear and inconsistent both lead to a lower achievement and greater risk of dropping out.

[25] J. J. Heckman (2010): The Economics of Investing in Children. Keynote address at the Center for Child and Family Policy's tenth anniversary event, March 29, 2010. https://www.youtube.com/watch?v=RtaO5PmJmS8
[26] Fortin, L., Marcotte, D., Potvin, P., Royer, E., & Joly, J. (2005): Typology of Students at Risk of Dropping out of School: Description by personal, family and school factors. *European Journal of Psychology of Educatio. XXI.* 4. 363-383.

In their research they used a 39 question survey conducted among students and collected school level data too with Maths and French results, and truancy. Furthermore they analysed behaviour problems, academic results, level of family functioning, level of emotional support from parents and the classroom climate. They identified 4 subgroups (The Antisocial Covert Behavior Type, The Uninterested in School Type, The School and Social Adjustment Difficulties Type, The Depressive Type), from which, interestingly, only 2 has low academic achievement or particularly problematic behaviour. The other two consist of those students facing family level problems and special type of behavioural issues such as lying or involvement in gangs. More precisely only 1/3rd of at risk students seemed low achievers (strengthening the observation of US researchers), **for the 2/3rd low motivation and being uninterested in school seem to be a much higher risk factor**.

They identified the Uninterested in school type as the biggest subgroup of at risk students, and the most similar to non-at risk ones at the same time. This group has a lot of sources so that intervention should target them for the sake of the highest chance for reward – researchers suggest.

VI. Professionals and their roles in tackling ELET

Multi-sectoral involvement and cooperation on governmental level both horizontal (different sectors) and vertical (central, regional, local levels) are essential according to any studies. However a monitoring of the effectiveness of this cooperation exists in only a few countries. In the Netherlands and the United Kingdom (Scotland), stakeholder cooperation is systematically monitored and evaluated, while in Finland and Switzerland it is an explicit requirement in policies to reduce early leaving (Eurydice-CEDEFOP 2014 75).

As detailed above the Recommendations[27] proposed multi-sectoral approach in tackling early leaving from education and training. Education has its natural connection with employment as eventually students will appear on the labour market for what they supposed to be prepared. However this connection is not all the time fluent. The youth guarantee programme[28] has an influence on this connection as the cooperation of the two sectors is required. Secondly social affairs have to be also strongly connected to education considering that ELET effects more the socially disadvantaged. Youth and family care systems can support teachers in identifying distress signals and warn them for possible risks of the specific student. Besides, these professionals are important in showing an alternative group of adults as a supportive background when family and school are not ready for this. Health sector must be involved as well, considering the many health related problems that can lead to drop out, while malnutrition, eating disorders, mental illnesses and so on has a lot to do with education difficulties too.

Particular professionals have outstanding roles in the support of students and in the coordination of different stakeholders for the sake of a young person at risk. **School headmasters** are crucial not only due to their powerful position in decision making but their role as a role model in connection with disadvantaged students and those with a lower level of attainment. They are also important in establishing and coordinating partnerships and teamwork with other schools and other professionals in connected fields.

In OECD countries there are a different level of school autonomy regarding decision making on budget, resource allocation, curriculum and cooperation. About 2/3rd of students in all these countries attends schools that has no influence on the salaries of teachers for instance, as it is decided by an authority. However the possibility to formulate their own curricula and assessment system depend much on many local regulations, even in the same country it can vary. Research suggests that a greater autonomy do lead to a better cooperation among the schools, proved by examples from Great-Britain and China. School leaders often need support also to refine their

[27] Council Recommendation of 28 June 2011 on policies to reduce early school leaving (Text with EEA relevance) (2011/C 191/01)
http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011H0701(01)&from=EN
[28] Council Recommendation of 22 April 2013 on establishing a Youth Guarantee.

leadership approach, or to have the state of art administration technics that ease the workload of teachers. In this sense autonomy contributes to tailor-made cooperation tactics of schools that can really learn from each other on the field they are lack of knowledge.

Teachers naturally are centrally important as having the first and continuous contact with students, so that they have the highest potential for a timely identification of distress signals and an intervention which is tailor made. They supposed to mean a close contact for families to learn about the circumstances of the student; however many times that does not happen fluently. Their responsibility is not identifying and solving problems solely but understanding their own limits of expertise and contact with other, relevant professionals as early as possible. (More about teacher-parent relationship is in the upcoming chapter.)
In most European countries, **psychologists** are involved in the process of supporting at risk students – whether in schools or other institutions. Their role is not only individual or group sessions or guidance with students but also the support of teachers in dealing with students.
Social workers or education welfare officers have an important role in providing financial assistance or crisis intervention for students with financial problems or family related difficulties – what more they sometimes offer group activities and age-group facilities or individual counselling. In most cases they take place at external organizations or institutions, however sometime they are part of the school team.

Education and career counsellors/advisers have their role in avoiding wrong career choice which is proven to be one of the strongest reasons for dropout. They work within or outside of schools depending on the specific country.

Youth workers or **peer-helpers** are involved in more than half of the countries providing non-formal learning opportunities. The cooperation of youth and education sectors is not always barrier free due to divided controlling bureaus.

Special pedagogues, therapists, doctors and nurses offer their service at separate institutions for pedagogical advisory or expert committees. Usually they are involved in case of students with special educational needs (based on Eurydice-CEDEFOP 2014 72-73.).

Based on the literature and study visit experiences successful, targeted programs to tackle early leaving from education and training are usually realized in a cooperation of different experts. Some of these professionals are already in the school with its regular place and activity, with its certain limits. Overall, however the biggest part of the work and responsibility is still at teachers. Special training for them to be more prepared are missing or not sufficient, while a good enough support is as well, many times not available. Successful examples strengthen the notion that timely and tailor made interventions are needed for the highest level of efficiency.

VII. Parents involvement

Involvement of parents has a crucial role throughout the individual's educational career. The motivation and expectations of a young person is highly depended on parental demands and reflections. The whole family environment has a determinate influence on school success. According to research dropouts come more often from families characterized by:

- a lack of supervision, a permissive parenting style,
- leaving their offspring to make more decisions themselves,
- poor aspirations regarding their children's schooling,
- less engagement with their children's schooling,
- negative reactions to school underachievement,
- low level of verbal interaction between mothers and children (NESSE 2010 19.).

For reaching parents they have to feel safe and comfortable as well, which is based on a partnership with the school. However there is an "apparent paradox of parental involvement" while different social class families expect other things from school: middle class parents usually consider schooling of their children a shared responsibility, while working class parents tend to expect teachers to deal with school issues and let them out of the solvation. "The same phrases, "contacting the school", "checking homework", "helping with homework" and "talking to teachers" appear to have different meanings for (middle class and working class) parents' (Lareau, 1996:59; see also Lawson,2003:123)" (NESSE 2010 21.).

Why is it important to involve parents?

Raising parental awareness can help identify learning difficulties and early signs of disengagement to allow for timely intervention (European Commission 2013 14.), which helps teachers as well to act earlier and better targeted. According to the reports about European policies, the cooperation with parents is seen as a key factor. Concerning the most important distress signals, for instance absenteeism, parental involvement is supported by the law from a very low level of unjustified missing already. Nowadays projects and new initiatives promote a much more general involvement of parents, not only in case of a problem, but in forming the basic frames of life in school such as curricula or school catering.

Parents have a great role in the future attainment and aspirations of their children also with their communication and expectations towards them. In general, higher class parents have as well higher expectations and encourage more their children to perform well in school nevertheless they usually see learning and knowledge as a very important value in life. According to studies lower class families have other values to follow as their experiences with school and learning may also be less favourable. Through these mechanisms the already existing social differences are getting stronger as they define future aspirations and relations to school much earlier than the actual school beginning. However, the perspective of parents can be reasonable. According to rational choice theorists, individuals

evaluate the costs and benefits of each investment in life. Education is an investment that worth especially for those coming from a higher class family as they have more to lose without an education: their position and a risk of downward mobility. Furthermore, with a better financial situation the relative cost of extra years in education are not so high as for poorer individuals and families (Iannelli 2002 2.). These life experiences and individual choices form the values behind the decisions in the family. Values determine the communication about the school issues at home. Vitaro and colleagues from Quebec analysed the features of being at risk of dropout by parental style considering the communication with the child about school-related themes. In their research they tested a prediction model on 751 low SES (socio-economic status) students. Their research proved the power of early disruptiveness and early academic performance in the prediction of dropout. They asked different age groups different questions to map their experiences in the family. They found parental style the most important for the 11-12 years old age group. They used the below questions in the survey for boys:

· Do your parents congratulate you for things you have done?
· Do your parents complain if you don't have good grades?
· Do your parents explain to you the reasons for some decisions they make with regard to you?
· Do you tell your parents what you would like to become when you grow older?
· Do your parents acknowledge your personal feelings?
· Do you speak to your parents about your feelings and personal thoughts?
· When your parents ask you to do something you don't like, do they first give you some explanation?
· Do your parents know where you are when you go out?
· Do your parents know who you hang around with?

(Vitaro, F., Larocque, D., Janosz, M., Tremblay, R.E. 2001 6-7.)

The perspective of parents

Under CROCOOS project an interview was made with the president of the European Parents Association (EPA)[29], Eszter Salamon, who shared examples of strong parental involvement. She mentioned a Catalan school where school catering is solely organized by parents or another example was Austria, where parents can vote for the textbooks. She claimed that parental involvement in the formation of the frames of school work, such as the curricula, can lead to a much more participative and democratic atmosphere. According to her experiences and knowledge gained from many international researches, parents can be involved the best relying on their expertise and giving a floor for them inside the school to share their knowledge and skills. Many times home-school relationship is limited to discussions about the problems with the child. Experts and parents suggest that, good news, informal activities, parent-child-teacher common activities should have a much greater role than today for a fluent and frustration-free connection. The most important factor is the sufficient communication between parents and teachers; however teachers are not trained for that. For the strengthening of this area many expert recommend that teacher education has to be improved with

[29] EPA website: http://euparents.eu/Main_page

elements about this issue as well. Organized parental representation is as well important for a shifting of mind-set of educators. The president of the advocacy group highlighted for instance visit at the family as a crucial first step from the teacher's side. Many times there is a discrepancy between the values reflected in school and at home, which is in connection with the roles of the young person at home (tasks, punishment, reward, responsibilities, expectations, and independency). Regular, also informal meetings of teachers and parents can contribute to the harmonisation of these values, or at least to find compromises and understand each other's perspective more.

Hungarian group discussion with parents

"Oh, Mum, are you putting me into jail, again?!"

Under CROCOOS project a group interview was made in Hungary, Budapest to have a more practical insight into parents' aspects. According to the six participants (1 father, 5 mothers) they can feel a huge contrast between their school-hood memories and their children's current experiences with education. They specified certain key-elements that make a good teacher: a person can always be asked for an advice; has wide range of knowledge; who loved us; someone respected; open; interesting. One of them told a story about a 70 year old teacher, very strict and maximalist, loved by everyone though. Her secret was she loved students and put as much energy into the process as she expected from others. In other worlds, good teacher is a role-model or an exemplar, but first of all, someone with a very particular personality.

Besides they mentioned community as an important factor, sharing that they used to have a lot of opportunity to talk and are still in touch with former classmates and teachers.

About present situation they claimed that school ruins initial intellectual curiosity, it tries to produce uniform student by breaking down personality. They believe that real knowledge comes today from outside of the school.

Parents feel they are alone.

Teachers give many times only negative feedback, sometimes they even say they don't like the students – one mother told. Furthermore teachers seem to have no idea how to teach e.g. learning technics for the students and they expect parents to do so. After all parents feel that they are abandoned with any difficulties with their child however are expected to solve problems occur in school.

"School today punishes only."

About the punishment-reward technics of nowadays schools they had a very pessimistic opinion too. According to their experiences it seems that school convey mostly negative messages about the behaviour and knowledge of its students, and cannot share any good news. A 10 year-old learns because of the person, so that there is no chance for his or her attention when the teacher cannot be respected – told another. The whole education system is outdated: current youth has completely different needs and interests than former generations, but teachers are trained the same way as before and they do not know the technics to grab their attention.

Good old days…

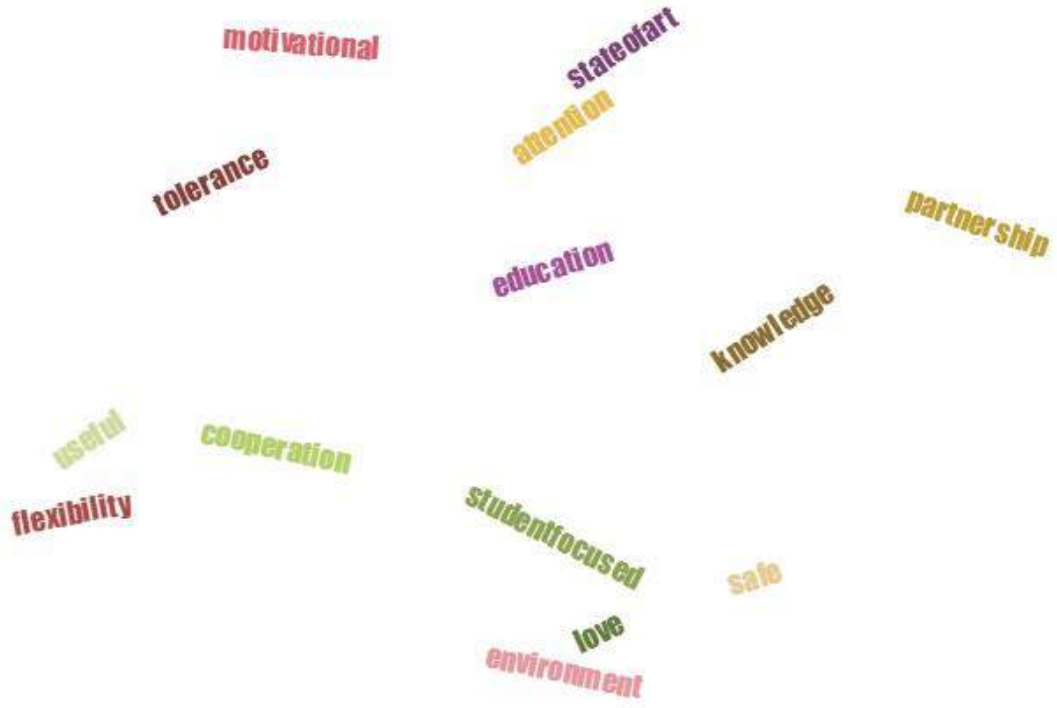
Former class teachers knew much more about the family background of each student so that they had realistic expectations from the children – they told. Class teacher's family visits used to be common – today it happens seldom.

Today school is an authority, instead of a safe environment that gives a place for community.

Parents feel they are rejected and are not treated as partners. Teachers are very much loaded and sometimes under too much pressure as well. The participants confirmed the knowledge that a different headmaster has a great impact on the attitude and behaviour of even the same teacher stuff.

In choosing a school the most important factor is the sympathy of the teacher and the child or young person, they said. It is a strong expectation of them that teacher should respect every student and stay open regardless of the student's personality and skills. Choosing a track in 14 years old seems to be too early, until 18 they should only learn the basics, such as reading and maths, but that on a high quality – told one.

Keywords for the good school



VIII. The aspect of the youth

There are lots of reasons from the side of the actual student behind the decision not to go to school anymore. Typical motives seem quite alike in Europe and in North-America. Many students have to help their family so that they either have to work or stay at home with a smaller sibling or an ill relative. Some student experience abuse in or are neglected by their family – which many times stay unseen. Drug or alcohol problems can as well occur, usually attached to criminal or half-criminal activities with a certain group of peers. Teen pregnancy has its role as well in early leaving especially in those traditional families where parents expect girls to become mothers on the first place.
Special needs are not always recognized and may be handled as behavioural issue, so that contributes to the alienation of the student. Depression or other mental illnesses are as well risk factors. Naturally outside influences and being uninterested in school are those simply but important reasons that has to be as well considered. Generally there is a lack of proper support from teachers and/or parents to help students overcome their difficulties. Many studies reported the perspective of students luckily. In this short introduction the aim is only to highlight some results that can be generally instructive and worth to consider among all circumstances.

What do students say?

In a Dutch survey 1700 early leaver students were asked about their main reason leaving school early. 30% of them connected their dropout **primarily to school related reasons** while personal and labour market reasons were only on the second and third place. 10 % claimed that the education at the school did not meet their expectations.[30] This result strengthens the role of school in the whole phenomenon.

In the framework of Safe Arrival Project the successful Sandwell method (originated in the UK) were used recently. This is based on the opinion of all stakeholders from education to health and social sectors, and on the experiences and views of students themselves. The most interesting part of the project is the fundamental integration of students' opinion about reasons behind leaving school early. To identify these reasons primarily a 68 question survey has been prepared for students based on a stakeholder roundtable about the most important factors in dropout. As a result 5 features seem to be the most crucial in dropout:

1. to be bullied
2. the outdated infrastructure of the school
3. if the student do not study at home
4. if the parents do not study with the student in early school years
5. if the student is not willing to work in the chosen profession

[30] Hermándy-Berencz Judit, Juhász Judit (2013): *Study visit to the Netherlands*. QALL project, Tempus Public Foundation, Budapest.

These markers made it easy to distinguish between the already dropped out and those who are still in school. This is just an example of putting the focus on students not only in the aspect of "saving" them from dropping out, but involving them in the whole discussion in exploring this issue.

US examples

Studies made about young people who left school early stating that dropout students cite very often **negative school experiences** as an explanation of leaving school and they claim their teachers were unsupportive, controlling and uninterested in them.[31]Importantly, at the beginning of the school career students usually like school and fully motivated to show their knowledge and talent, however after a while disengagement happens many times until a certain point of complete alienation (Crain-Dorough, M. L. 2013 12.). Some students stay in school despite the odds. According to the Crain-Dorough study they felt to be important for the teachers and they experienced that their success was important for the school stuff. Basically inter-personal relationships and the level of professional competence were significant for at risk students to have a successful school career (Crain-Dorough, M. L. 2013 47.). Student-teacher relationship as a factor is strengthened by many other studies i.e. Potvin et. al. 2001, just as the satisfaction level of students with teachers which correlates with their school success.
Focus group discussions among 16-25 year old dropouts in the US proved that most of them believed to have the ability to attain a higher degree if they have stayed in school longer or were expected to perform better by the parents and teachers. Most of them regretted to leave school early and found a higher degree crucial for their career. Many claimed to return to school in case of possibility in their age (Burrus, J., Roberts, R.D. 2012 3.).

These examples show the importance of professionals getting in touch with young people in their sensitive period, but also show how small things can be enough to behave despite the odds. With a different mind-set, teachers and other adults around children and young people can contribute many of them graduating from school and starting with better chances.

[31] Adaptive Technologies Inc. (2008): *Using Predictive Modeling to Improve High School Dropout Prevention*. White paper, USA.

IX. Conclusions

The current report is aiming at giving an introduction of the state of art European policy along with research results from Europe and the overseas regarding early leaving from education and training. Following the logic of the CROCOOS – Cross-sectoral cooperation focused solutions for preventing early school leaving project, it describes what an early warning system means, what policy circumstances can be identified, what kind of early distress signals can be observed and what are the methods and dilemmas of data gathering. Furthermore it gives a little insight into the different actors' role, such as school leaders, teachers, other professionals and parents and shows something from the students' perspective. With this logic it reflects the construction of an early warning system from a system level with policy, regulation and centralized databases, till the individual student's situation, highlighting the importance of each actor during the process.

The report is willing to support the 1.5 yearlong pilot project in three Eastern-European countries; furthermore information gained here is going to be presented on a website to give further ideas to professionals. The aim is to give a support however only real practice can justify what is useful in the specific environment.

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Many research based studies and policy level reports strengthen the notion that institutional factors may play an important role in weakening (but also reinforcing) the association between social background and young people's educational attainment (Iannelli 2002 3.). For the equity in the society, the equity in education is a precondition; however without an equalising school system society would never become more equal either. It is also important to reflect on the relation of e.g. people in poverty or disabled individuals and institutions: how can systems and professionals handle those that do not fit to the mainstream. An early warning system should partially serve as a conscious for all of those having a responsibility in the support of children and possessing a certain position that have an effect. More concretely, a proper early warning system should be sufficient not only for prediction but the monitoring of the efficiency of interventions and ability for a continuous amelioration too. One suggested method of prediction could be based on the following logic:

- Individual level: the system has detailed data on the already dropped out students → in case of the appearance of the same signals it sends a warning signal to all relevant actors.
- Mezzo level: for the specific school either based on preliminary defined criteria or the experiences of similar schools a warning system operates, sending a signal in case of a certain limit of distress signals or dropout on school level.
- Macro level: on settlement or region level, based on the data and statistics of the specific location a warning signal is sent out at the other but similar settlements. This level is farer from the individual so that a lower pay-off is expected (Salomvári 2014).

This three-level structure is just an example for the framework of a complex and comprehensive early warning system; however it shows important bricks of the whole construction: an EWS has to

have elements on individual, institutional and local levels. It also implies the need for an inter-sectoral cooperation from teachers till majors, involving all other joint professionals.

Success in education system has as well more then only one side. The performance of the students is still important, however there is getting to be more and more focus on equity when considering how good an educational system is.

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XI. Appendixes

1. Appendix

Sample Student Data Entry Screen and Report Screen

Student Data Entry Screen (Semester 1):

Student Information				Semester One Student Data						
Last Name	First Name	Student ID	Grade	20 Day Count	Days Absent Quarter 1	Days Absent Quarter 2	No. Courses Failed (All)	No. Courses Failed (Core)	No. Credits Earned	GPA
Example Student 1		1234	9	6	7	4	0	0	3	3.90
Example Student 2		5678	9	0	5	15	2	2	2.5	1.80
Example Student 3		9512	9	0	1	0	0	0	3	4.00
Example Student 4		7532	9	1	2	3	2	0	3	3.10
Example Student 5		6541	9	5	6	12	3	1	1.5	2.10
			9							
			9							
			9							

Student Report Screen (Semester 1 and Full Year):

Student Information				Semester Indicators of Risk					Full Year Indicators of Risk			
Last Name	First Name	Student ID	Grade	Flag for 20 Day Count Attendance	Flag for Q1 Attendance	Flag for S1 Attendance	Flag for Course Fs	Flag for GPA	Flag for Attendance	Flag for Course Fs	Flag for GPA	Flag for "Off-Track"
Example Student 1		1234	9	Yes	Yes	Yes	No	No	Yes	No	No	On-Track
Example Student 2		5678	9	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Off-Track
Example Student 3		9512	9	No	No	No	No	No	No	No	No	On-Track
Example Student 4		7532	9	No	No	No	Yes	No	No	Yes	No	On-Track
Example Student 5		6541	9	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Off-Track
			9									
			9									
			9									

Source: Heppen, J. B., Bowles Therriault, S., 2008 6.

2. Appendix

Sample Early Warning Indicator Data Sheet for Classroom Teachers

Student Name	2007-2008: Days Absent	2008-2009: Days Absent	Negative Behavior Comments	Math Grade 3/1/2008	Math Grade 6/1/2008	Literacy Grade 3/1/2008	Literacy Grade 6/1/2008	Reading Level 6/1/08	PSSA 2008 Math	PSSA 2008 Reading
Student A	53	0	10	D	D	F	F	5	Proficient	Basic
Student B	36	2	7	B	D	D	D	6	Basic	Basic
Student C	14	0	1	C	B	C	C	6.5	Basic	Proficient
Student D	5	1	6	C	B	D	C	7	Basic	Basic
Student E	18	0	7	C	C	D	F	5.5	Below Basic	Below Basic
Student F	29	2	1	D	C	D	D	6	Below Basic	Below Basic
Student G	6	0	8	D	D	F	D	5.5	Below Basic	Below Basic
Student H	46	2	3	B	B	D	F	5.5	Basic	Below Basic
Student I	41	0	4	D	C	D	D	3.5	Below Basic	Below Basic
Student J	17	0	1	B	B	C	D	2	Below Basic	Below Basic
Student K	61	4	7	C	F	D	C	7	Below Basic	Basic
Student L	24	0	10	F	F	C	D	6.5	Below Basic	Basic
Student M	18	0	2	B	D	D	C	3.5	Below Basic	Below Basic
Student N	3	0	6	B	B	B	C	7	Basic	Basic
Student O	2	1	5	C	D	D	D	5.5	Basic	Basic
Student P	15	1	4	D	D	F	D	5.5	Basic	Below Basic
Student Q	15	1	10	C	D	D	D	6.5	Below Basic	Below Basic
Student R	6	0	1	D	D	D	D	3	Below Basic	Below Basic
Student S	16	1	4	D	D	D	D	5	Below Basic	Below Basic
Student T	15	0	7	C	F	D	D	6	Below Basic	Basic
Student U	18	0	6	C	D	D	D	6.5	Below Basic	Below Basic
Student V	23	0	7	C	F	C	F	6	Below Basic	Below Basic
Student X	16	0	6	C	F	D	D	6.5	Basic	Basic
Student Y	18	1	3	B	C	D	D	6.5	Basic	Basic
Student Z	4	0	7	C	C	D	D	6.5	Proficient	Below Basic
Student AA	42	2	1	D	C	D	D	5.5	Below Basic	Below Basic
Student AB	13	0	2	D	D	D	C	4	Below Basic	Below Basic
Student AC	8	0	2	D	D	D	D	2	Below Basic	Below Basic
Student AD	22	1	8	C	F	D	D	6	Below Basic	Below Basic
Student AE	50	1	0	D	D	C	C	4.5	Below Basic	Below Basic
Student AF	18	0	6	C	C	F	D	5	Below Basic	Below Basic
Student AG	1	0	3	NG	D	NG	D	6	Below Basic	Basic

Source: Iver, M. A., Mac Iver, D. J. 2009 23.

3. Appendix

Sample Intervention Recording Sheet for Grade-Level Teachers

Date	October 7, 2008
Grade Level	6th

Grade Group Team Members	K S	M. D	K C	E. Y	E T
	B. W	M. P		T B	
Meeting Facilitator	A. M , L. H				

Student	Presenting EWI from 6/08		EWI Today		Level of Concern	Student Strengths	(Tier)-Responder = Intervention	Status	CSAP Tier	Notes	(Tier)-Responder = New Intervention
	Code	Notes	Code	Notes							
Student A	B	3 neg comm in M	BML	F on 2 math quizzes	2	PA	(T)-MT=SGI				
		BRL -3.5				C					
		D in Math				T					
Student B	A	78% attendance	AB	Absent 5 days	3	C	(t)hrt & cy=ch				
							(t)hrt & cy=gbn				
							(t)hrt & cy=p/s/t c				
							(t)cy=ri				
Student C	Ac	F in M & L	DPA	Literacy	3	AS+	(t)cy=hs				
	B	6 neg comm 3&3	N/IH			AC+					
			NP			KBL					
			NGC								
Student D	A	79% attendance	LS	Behavior	3	FR	(t)hrt & cy=ch				
		BRL -3.5	CO				(t)hrt & cy =p/s/t c				
		D in M & L	AC				(t)cy =dc				
							(t) cy =ri				
Student E	B	12 neg comm 8&4	LS			WG					
	Ac	F in M	DA								
		BRL - 3.5	AC								
			CO								
			LS								
New Student											

Source: Iver, M. A., Mac Iver, D. J. 2009 24.

4. Appendix

Sample Intervention Code Sheet for Grade-Level Teachers

CODE DIRECTORY

Presenting EWI		EWI Today		Level of Concern		Responder		Intervention-Service		Student Strengths	
A	Attendance	**ATTENDANCE - A**		1	Mild	ADMIN	Administrator	IN	Investigate deeply	AC+	Attends class on time
B	Behavior	AB	Absent two or more days betw grade group meetings	2	Moderate	C	Counselor	O	Other	AS+	95% attend.
Ac	Academics	LATE	Late two or more days betw grade group meetings	3	Severe	C & E	Consulationa & Evaluation	**ATTENDANCE/LATENESS**		C	Cooperative
		BEHAVIOR - B		**Intervention- Tier**		CA	Counseling Asst.	CH	Call home	DH	Does homework
		AC	Annoys classmate(s)			CD	CADE	DC	Daily check-in	FR	Friendly
		CO	Calls out	W	Wholeschool/ Classroom	CIS	Communities in Schools	GBN	Greet by name	KBL	Knows Basic Lit.
		DA	Disrespectful to adult	T	Targeted	CRL	Com Rel. Liaison	P/S/T C	Contract	KBM	Knows Basic Math
		DP	Defaces property	I	Intensive	CY	City Year	R/CM	Referral/case managemt	O	Other
		F	Involved in fight	**Status**		ELLT	ELL Teacher	RI	Rewards/Incentives	O+	On time to class
		LS	Leaves seat/classroom	1	Improved	ESRT	Empow Sch Resp Team	**BEHAVIOR**		PA	Poss. Attitude
		MAC	Makes inappropriate comments	2	Same	HRT	Homeroom Teacher	Start w/ Above Interventions		SA	Strong Art skills
		RH/S	Roams hallways/stairwells	3	Worse	JHU	JHU Content Advisors	CCUE	Clear consequences uniformly enforced	SC	Strong Computer
		U	Not in uniform			LS	Literacy Specialist	D S	De-escalate by adult	SLS	Strong Lit skills
		ACADEMICS -LITERACY/MATH - Ac				LT	Literacy Teacher	I/R	Incentive/Rewards	SM	Strong Music skills
		BML	Doesn't have basic math facts			MS	Math Specialist	IM	I-Messages	SMS	Strong Math skills
		BRL	Below reading level			MT	Math Teacher	PCW	Pre-class Work	SPE	Strong in Phys Ed
		DPA	Does not pay attention			N	Nurse	PF	Positive feedback	SS	Strong Science
		LBL	Low benchmark In literacy			OCT	Other Content Teacher	PR	Predictable routines	SSS	Strong SS skills
		LBM	Low benchmark In math			Par	Parent/Caregiver Support	**ACADEMICS -L/M**		T	Tries hard
		LODT	Low on other diagnostic assess.			PLCA	PLC Academic Dean	AEH	Aligned Extra Help	WG	Well groomed
		N/IH	No/incomplete homework			PLCD	PLC Discipline Dean	ASA	After-school Activity	WH	Good work habits
		NGC	Does not grasp concept[s]			PM	Peer Mediation	DI	Differentiate Instruction		
		NP	Not prepared for classwork			PO	Parent Ombudsman	GR	Guided Reading		
		RDA	Refuses to do assignments			RDGS	Reading Specialist	HS	Homework Support		
						SA	Student Advisor	MM	Math manipulatives		
						SET	Special Ed Teacher	SGI	Small group instruction in math		

Source: Iver, M. A., Mac Iver, D. J. 2009 25.

5. Appendix

Middle School Students Exhibiting Warning Signals

Early Warning Indicator*	Number of students off-path	Number of these students still off-path in March 2009	Percent reduction in the number of students off-path
Failed math	65	25	62 percent
Failed literacy	86	22	74 percent
Less than 80 percent attendance rate	38	23	39 percent
Three or more negative behavior comments on report card	409	225	38 percent

Source: Iver, M. A., Mac Iver, D. J. 2009 27.

6. Appendix

Major dimensions of excellent teachers in the Hattie study on teacher's role in educational success

"Expert teachers :
can identify essential representations of their subject:

- much more responsive to students,
- expert teachers are VERY context bound, and find it hard to think outside the specifics of their classrooms and students. Generalization is not always their strength,
- problem solving attitude and flexibility in teaching,
- That is, they are greater seekers and users of feedback information about their teaching
- Too often, they see such feedback as providing information
- about children, their home backgrounds, and their grasp of curricula – and too rarely do they see such feedback as reflecting on their expertise as teachers.
- Expert teachers are better decision-makers and can identify what decisions are important and which are less important decisions
- They were skilful in keeping the lesson on track and accomplishing their objectives while also allowing students' questions and comments as springboards for discussions. Moreover, they achieved a balance between content-centered and student-centered instruction.

can guide learning through classroom interactions,

- They build climates where error is welcomed, where student questioning is high, where engagement is the norm, and where students can gain reputations as effective learners.
- Expert teachers have a multidimensionally complex perception of classroom situations
- Expert teachers are more context-dependent and have high situation cognition

can monitor learning and provide feedback,

- Expert teachers are more adept at monitoring student problems and assessing their level of understanding and progress, and they provide much more relevant, useful feedback.
- Expert teachers are more adept at developing and testing hypotheses about learning
- experts develop automaticity so as to free working memory to deal with other more complex characteristics of the situation, whereas experienced non-experts do not optimise the opportunities gained from automaticity.

can attend to affective attributes,

- By having such respect, they can recognize possible barriers to learning and can seek ways to overcome these barriers.
- Expert teachers are passionate about teaching and learning

can influence student outcomes,

- Expert teachers engage students in learning and develop in their students selfregulation, involvement in mastery learning, enhanced self-efficacy, and self-esteem as learners.
- Expert teachers provide appropriate challenging tasks and goals for students
- Expert teachers enhance surface and deep learning"

(Hattie, J. 2003 7-10.)

7. Appendix

Methods of teacher assessment in the Hattie study on teacher's role in educational success

"Teacher Interviews before and after the lessons observed

Before

- What did you think about as you planned?
- Distinguishing Expert Teachers from Novice and Experienced Teachers. 11
- What factors influenced your planning?
- If one of your students had difficultly understanding (specific content from lesson
- observed), what are some suggestions you could generate for helping him/her to make
- connections?

After

- What were the most important decisions you made during today's lessons?
- What influenced your lesson planning?
- What expectation do you have for [student's name]
- How does [student's name] approach to learning vary from day to day?
- Would you rate this lesson as successful? Why or why not?
- How else could the lesson have gone?
- What particular things do you want to accomplish as teacher?

Lesson transcripts

- Analyze to determine teachers ability to use classroom data to define and address learning.
- Determine the degree with which questions were used to assess skill, obtain control, or
- exercise management in the classroom.
- Determine how teachers generate specific modifications to activities that address the
- changing social and cognitive needs of students.
- Coded independently based on surface and deep learning opportunities, teacher questions
- and student responses to teacher, to each other, and to concepts.

Classroom observations

- Code students off- and on-task behaviours.
- Student engagement in lesson.
- Class groupings.
- Management vs. instructional time.
- Nature of classroom activity (e.g., development of new content, review, practice, enrichment, assessment, homework, transitional, lesson close, assigning tasks, relationships)
- Code feedback – amount and nature, and from whom to whom.
- Determine teachers ability to identify events occurring simultaneously in the classroom.

Scenarios

It is five weeks into the school year, and you have just been assigned a new English class, because the previous teacher left abruptly. The previous teacher left a grade book with grades and attendance recorded, student information cards containing demographic information on one side and teacher comments about the student on the other, corrected tests and homework assignments, and the text book. Question: Imagine that you have no more than 4-5 minutes before you meet the class for the first time, what would you plan to do in the first lesson?

Student Interviews before and after the lessons observed

- Tell me what you did during this lesson [Probe for examples[
- What do you think your teacher wanted you to learn today?
- What expectations do you believe the teacher has of you?"

(Hattie, J. 2003 5.)

8. Appendix

On-track indicator by Consortium on Chicago School Research

"The Consortium on Chicago School Research introduced the "on-track indicator" in 2005 by combining two highly predictive ninth-grade risk factors: course credits earned and course grades.

First-year high school students in the Chicago Public Schools are classified as "on track" if they earn

(a) at least five full-year course credits and
(b) no more than one F in one semester in a core course during the first year of high school.

On-track students are more than 3.5 times more likely than students who are off track to graduate from high school in 4 years (Allensworth & Easton, 2005).

The on-track indicator reflects students' academic performance during their first year of high school, a critical transition period in the education pipeline. In Chicago, the on-track indicator is a better predictor of graduation than students' background characteristics or middle school achievement test scores. For example, Chicago students who are in the highest quartile in eighth-grade achievement scores but fall off track in their freshman year are far less likely to graduate than students who were in the lowest quartile on eighth-grade achievement but are on track at the end of freshman year (Allensworth & Easton, 2007)." (Heppen, J. B., Bowles Therriault, S., 2008 2.)

9. Appendix

TOOL 15 – a device for monitroing students at risk

Key Data for an "Early Warning System" with On- and Off-Track Indicators That Become the Basis for Tiered Interventions

Purpose: This tool provides various ways to analyze school data related to students who are in danger of falling off-track, students who are slumping and entering a danger zone, and students who are firmly on-track. By knowing the number of all students in each category it is possible to see which groups of students need help, and to make some estimates about the kind of help that can be targeted to their unique circumstances. While our example uses first-time ninth graders, this analysis can also be done beneficially for students in all other grades – 6, 7, 8 and 10 especially. It is also useful to disaggregate the information, especially by gender.

Foundation: Matching interventions with need is the most important part of an Early Warning System. The essential first step is to systematically understand how many students are in each category in each school. The second step is to look at the absolute numbers and determine what is feasible given the capacity in the school and community.

Inventory One: In Danger of Falling Off-Track In the Past Semester					
	Missed 5-9 days of school	Had 2 or more in-school suspensions	Had C or D average	Received one F in a core academic subject	
All students					
First-time 9th graders					
Students who are repeating a grade					

Students who are two or more years overage for grade					
Inventory Two: Fallen Off-Track In the Past Semester					
	Missed 10 or more days of school	Had 3 or more in-school suspensions	Had 1 or more out-of-school suspensions	Received two or more Fs in a core academic subject	
All students					
First-time 9th graders					
Students who are repeating a grade					
Students who are two or more years overage for grade					
Inventory Three: Academic Slumping Coupled with Attendance Slumping average, with multiple days missed in a specific time period				**Number of students with a C or D**	
	C/D average	0-4 days missed	5-9 days missed	10-19 days missed	20+
All students					
First-time 9th graders					
Students who are repeating a grade					
Students who are two or more years overage for grade					
Inventory Four: On-Track for Success Number of students with an A or B average, 95% or higher attendance, and no suspensions					
	A or B average	95% attendance	No in- or out-school suspensions		
All students					
First-time 9th graders					
Students who are repeating a grade					
Students who are two or more years overage for grade					

All of our examples are for a 9th grade early warning system. Use a similar approach to analyze grades 6, 7, 8 and 10.

The charts below are ways to collect the needed data					
ATTENDANCE. Number of students with this number of missed days in a specific time period	0-4 days	5-9 days	10-19 days	20+ days	
All students					
First-time 9th graders					
Students who are repeating a grade					
Students who are two or more years overage for grade					
BEHAVIOR - IN-SCHOOL SUSPENSIONS. Number of students with this number of in-school suspensions in a specific time period	0-1	2-3	4-5	6+	
All students					
First-time 9th graders					
Students who are repeating a grade					
Students who are two or more years overage for grade					
BEHAVIOR - OUT-OF-SCHOOL SUSPENSIONS. Number of students with this number of out-of-school suspensions in a specific time period	0-1	1	2	3	
All students					
First-time 9th graders					
Students who are repeating a grade					
Students who are two or more years overage for grade					

ACADEMIC FAILURE. Number of students with this number of Fs in a specific time period	1	2	3	4	
All students					
First-time 9th graders					
Students who are repeating a grade					
Students who are two or more years overage for grade					
ACADEMIC FAILURE. Number of students with an F in English, mathematics or both in a specific time period	1	2	3	4	
All students					
First-time 9th graders					
Students who are repeating a grade					
Students who are two or more years overage for grade					

Source: Guidance, resources and tools to help your community and your schools raise graduation rates and better prepare young people for success. Robert Balfanz and Joanna Hornig Fox from the Everyone Graduates Center at the Johns Hopkins University School of Education and by John M. Bridgeland and Mary Bruce of Civic Enterprises.