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Dropout and Completion in Higher Education in Europe

Annex 1: Literature Review

Education
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Annex 1

Literature Review



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1. Introduction

Stimulating study success in higher education has become a more important policy issue in Europe during the last 15 years, and the EU 2020 Strategy has a direct goal that at least 40 per cent of 30-34 year olds should hold a tertiary education qualification by 2020 (European Commission, 2010; European Commission/EACEA/Eurydice, 2014). In order to achieve higher rates of tertiary degree holders, it is not enough just to increase access to higher education; students also have to be encouraged to complete a degree.

Most European countries have moved towards mass higher education: widening participation policies and the general level of societal development are stimulating larger cohorts of students to start studying. But mass higher education also brings a larger diversity in the student population that can influence completion and drop-out. In a mass higher education system, we cannot expect all students to be equally well prepared and equally highly motivated. Following Trow's (1973, 2006) arguments on the transition from elite to mass higher education and the challenges this change implies, we can assume that the proportion of students leaving prior to degree completion is greater today than it used to be when higher education was a privilege of the few. In mass higher education, the more diverse student body also has implications for institutions and their interaction with students.

Although the Bologna process has aimed to standardise and connect higher education systems across Europe there is still significant diversity across national systems and within these systems, so it is likely that there will be different policy priorities (discussed below). Hence, study success might not be at the top of the higher education policy agenda in all countries, as some systems might have other pressing higher education policy issues. Therefore, this literature review is sensitive to the fact that the issue in focus might not be as pressing in all countries the study is covering. At the same time all countries can benefit from ideas and input on how their higher education system can be more efficient, as students dropping out of higher education can be viewed as waste of public resources (Yorke, 1999; Yorke and Longden, 2004).

Study success is a multidimensional concept and has different meanings and interpretations in different countries. For example, study success includes:

- Continuation from one year of study to another;
- Completion of the whole higher education programme of study
- Duration to completion within a specific time period
- Attainment of intended qualification at the end of the programme of study or period in higher education
- Good attainment is achieving a good grade or higher education qualification
- Progression into employment or training.
- Progression into graduate employment or training.
- Progression into postgraduate study.

In this study we use the term study success, which incorporates all of the outcomes of higher education summarised above, unless specified otherwise. We also use drop-out

to refer to students who enter higher education but withdraw from the system without achieving some or all of the outcomes above.

Study success, however it is measured, can be influenced by a wide variety of factors at various levels, such as education structures and pathways to higher education, national policies, financial and other incentives, institutional structures, teaching and learning approaches and environments, curriculum design and student background characteristics, in addition to the interrelations between all of these factors. The main aim of this literature review is to identify the factors that contribute to study success (and drop out) – either positively or negatively, and to categorize the types of national policies and practices that are thought to contribute to improving study success in countries across Europe. We recognise that not all policies in all countries have been evaluated. This review therefore is descriptive in nature, rather than evaluative. It is being used to identify and categorise the issues and policies that are likely to contribute to improving study success, which will inform the analytical model. The effectiveness of alternative approaches will be explored through the primary research in the participating countries, through the lens of the analytical framework.

The literature review is structured as follows: within the second section (section 1.2) the methodological approach is described in terms of keywords and databases used. The results of a quick scan survey of national experts in Europe is also presented. Section 1.3 provides a short overview of how study success and drop out are measured. The next section (section 1.4) summarises results of research on the factors that positively and negatively contribute to study success and drop out. This includes variables related to the individual student; academic practices in the classroom; the subject and programme of study; institutional cultural, organisation and characteristics; and national level policies and characteristics of the higher education system. In the fifth section (section 1.5) we investigate the national policies that have been implemented to improve study success across Europe. Here different policy areas will be distinguished, i.e. policies relating to: funding, the organisation of higher education and teaching and learning and student support. The final section (section 1.6) summarises the main findings of the literature review, identifies research gaps, and proposes a potential focus of the project's future research and potential outcomes of the study.

2. Scope of the literature review

The analysis of study success and drop-out has been a flourishing topic in the literature for many years, especially in the US. According to Tinto (2006), a whole industry of institutional research has been developing around student success due to the fact that completion rates play an important role in signalling the quality of teaching for potential students in choosing their HE institution. Therefore a high number of publications investigating study success and drop-out are available focusing on the US context and often zooming in on the institutional level and measuring the effectiveness of specific institutional measures to improve study success and decrease drop-out. Reasons for study success and drop-out at the individual level as well as at the institutional level have also been investigated extensively in the scientific literature (see for example the overview by Reason, 2009). These studies have already been summarized in literature reviews by other authors (see for example Kuh *et al.*, 2006).

The main aim of this literature review is to identify the factors that contribute to study success (and drop out) – either positively or negatively, and to categorize the types of national policies and practices that are thought to contribute to improving study success in countries across Europe. This review therefore focuses on European literature, especially as we recognise that there are significant differences between European systems of higher education and the US. We have drawn on US literature where there are gaps in the European literature, and it is therefore informative to do so.

2.1 Sources for the literature review

This literature review builds on two main sources:

- A review of scientific literature on factors that impact both positively and negatively on study success, and national policies that are dealing with study success and drop-out.
- A country 'quick scan' survey among national experts across Europe (see below).

Scientific literature

The search for scientific literature on study success and drop-out has been done by members of the core research team, using the following well-established bibliographic data banks:

- Web of Science
- Scopus
- EBSCO Host
- Google Scholar.

Keywords that have been used for the search – mostly as combinations – were:

- Student success
- Study success
- Drop-out (different spellings like dropout, drop out and drop-out)

- Completion
- Non-completion
- Withdrawal
- Retention
- Transfer
- Persistence
- Time to degree
- Policies

The searches have been geographically limited to Europe including individual searches for each of the 36 countries included in this research study (a list of the countries is included in the appendix). With regards to factors that influence study success studies that have been published since 2004 have been included. For studies on policies and their effectiveness only more recent studies that have been published since 2008 have been included, to present the most up-to-date literature about Europe. We have focused on undergraduate higher education leading a degree, or other undergraduate outcomes. We have not differentiated between full and part-time students, or young and older students; however much of the material focuses on young full-time students and specific searches for literature on part-time learners produced minimal results. We have indicated if the literature reviewed specifically takes into consideration other groups/modes of studying.

Survey among experts

In addition to the literature search, a survey among national experts was conducted. This collected information on the most recent policies and initiatives that have been implemented in the 36 European countries. It also asked national experts to summarize grey literature and evaluation studies (especially those published in their national language) on the factors impacting on study success and evaluation reports national policies and practices seeking to improve study success and reduce drop-out.

2.2 Outcomes of the search

Scientific literature

The search for scientific literature revealed that quite a number of studies investigating study success and drop-out in Europe can be found. The majority of studies published as scientific literature deal with factors contributing to study success and drop-out (especially the reasons for drop-out). Student characteristics such as, socio-economic and ethnic background, motivation, competencies and ability are a key focus. Institutional characteristics such as organisational leadership and the composition of the student population at the institution or in selected study programmes are also explored. The search revealed that scientific studies dealing with the impact of national policies and practices regarding study success are less common. In addition, the geographical coverage of the research is limited. Not all European countries under review have studies published as scientific literature on either factors contributing to study success and drop-out or policies to address these issues.. A number of published scientific studies are available for example for the UK, Norway, Germany and Italy. However, there were no studies available about Iceland, Lithuania, Cyprus, Macedonia, Malta, Slovenia, the Czech Republic, Bulgaria, Hungary,

Montenegro, Romania, Slovak Republic, Serbia, Portugal, Liechtenstein and Luxemburg. Here the country quick scan is a valuable source to fill this gap.

Results of the quick scan survey among experts

The survey among national experts covered the 36 European countries included in this study. The questionnaire has been completed for 35 countries - only the expert from Iceland has not returned the questionnaire to date.

Besides open questions, the quick scan survey among national experts also included some closed questions (see Annex 7.3). These investigated the relevance of study success and drop-out for the national policy agenda, the national understanding of study success, the existence of national policies dealing with study success and drop-out, the role of study success and drop-out in the funding of higher education institutions and the most active stakeholders in dealing with study success and drop-out. The main results of the closed questions are summarized below.

Relevance of stimulation of study success in countries

Compared to other issues currently important for higher education policy in the countries under review, only three country experts indicated that the stimulation of study success is very high on the agenda: England, France and Greece. For Austria, Latvia and Turkey, experts indicated that the topic is not on the political agenda at all. Table 1.1 gives an overview of the current relevance of the stimulation of study success for the national policy agendas in European countries.

Table 1: Relevance of stimulation of study success on national higher education policy agendas

Compared to other issues that are currently important in higher education policies in your country, is the stimulation of study success high on the agenda of the responsible national authorities?	Countries
'5' very high on the agenda	Greece, England, France
'4' high on the agenda	Hungary, Italy, Denmark, Estonia, Finland, Flanders (Belgium), Macedonia, Malta, Netherlands, Norway, Serbia, Slovenia, Sweden
'3' on the agenda	Ireland, Croatia, Czech Republic, Germany, Luxemburg, Montenegro, Poland, Portugal, Romania, Spain, Switzerland
'2' only very little relevance on agenda	Bulgaria, Cyprus, Island, Liechtenstein, Lithuania, Slovak Republic
'1' not at all on the agenda	Austria, Latvia, Turkey

Table 2: Policies and regulations on study success; study success related to the funding of higher education institutions; and the most important stakeholders engaging in the improvement of study success

Country	National Policies on study success in place	National regulations on study success in place	Funding of higher education institutions related to study success	Most important stakeholders engaging in implementing measures to improve study success*
France	Yes	Yes	Yes	Universities/other HEI/Governmental Authorities/Other stakeholders
England	Yes	No	Yes	Universities/other HEI/Governmental Authorities
Greece	Yes	Yes	No	none
Denmark	Yes	Yes	Yes	Universities/other HEI/Governmental Authorities
Estonia	Yes	Yes	No	Universities/other HEI/Governmental Authorities
Finland	Yes	Yes	Yes	Governmental authorities/Student bodies
Flanders (Belgium)	Yes	Yes	Yes	Universities/other HEI/Governmental Authorities
Hungary	Yes	Yes	-	none
Italy	Yes	Yes	Yes	Universities/other HEI/Governmental Authorities/Student Bodies
Macedonia	Yes	Yes	No	Universities/Student bodies
Malta	No	No	No	Universities/other HEI
Netherlands	Yes	Yes	Yes	Universities/other HEI/Governmental Authorities
Norway	Yes	Yes	Yes	Universities/other HEI
Serbia	Yes	Yes	No	Universities/Governmental authorities/Student bodies
Slovenia	Yes	Yes	Yes	Universities/other HEI
Sweden	Yes	Yes	Yes	Universities/other stakeholders
Croatia	No	No	Yes	none
Czech Republic	No	No	No	Universities
Germany	Yes	No	Yes	Universities/other HEI/Student Bodies
Ireland	Yes	No	No	none
Luxemburg	No	No	No	None
Montenegro	Yes	Yes	No	None
Poland	Yes	Yes	No	Universities/other HEI/Governmental Authorities
Portugal	No	No	No	none
Romania	Yes	Yes	No	Governmental authorities/Student bodies
Spain	Yes	No	No	none
Switzerland	No	No	No	Universities/other HEI
Bulgaria	Yes	No	No	Universities/other HEI
Cyprus	No	No	No	Universities/Student bodies
Lithuania	No	No	No	Universities/other HEI
Slovak Republic	No	Yes	No	Universities/Governmental Authorities
Austria	No	No	No	none
Latvia	No	No	No	Universities/other HEI
Turkey	No	No	No	Universities/Governmental Authorities

* Stakeholders in higher education that have been rated as active or very active by national experts.

The overview shows that about two thirds of the countries under review have policies in place, and about half of the countries have implemented regulations that deal with study success and drop-out. For one third of the countries, study success plays a role in the funding of higher education institutions. In the majority of the countries universities and other higher education institutions are engaged 'actively' in improving study success, while in some countries governmental authorities like ministries also play a pivotal role (Table 1.2).

Tables 1.1 and 1.2 also reveal that there is a slight correlation between the relevance accorded to study success and the existence of policies and regulations at the national level. For most of the countries where study success was high or very high on the agenda, we find that policies as well as regulations and funding related measures are in place and that governmental authorities are engaged with this topic. In countries where study success is not on the higher education policy agenda at all, there are no policies or regulations at the national level and universities and other higher education institutions are usually the only stakeholder engaging with this issue.

2.3 Indicators and measurements of study success and drop-out

Study success is the dependent variable in this study, but it is still an open question as to how the concept should be measured, especially across countries. How study success is defined and measured in different countries will be explored in detail as a part of the case studies and the development of the study success profiles (scoreboard).

From the scientific literature it is clear that drop-out and completion rates are measured in very different ways (Hagedorn, 2004). Though describing a rather simple matter – students successfully completing or unfortunately leaving their study programme – the indicators of 'success' are difficult to operationalize and calculate. In particular, identifying students who have finally left higher education is a major issue. For instance, a student may leave higher education but subsequently return after a break from study. Also changes to study programmes and/or in the higher education institutions are a challenge for these indicators. In recent years different measures and approaches have been developed in the literature.

Among the indicators used the completion rate is the most important indicator. Mostly the completion rate relates the number of students who have successfully completed a study programme at a higher education institution compared to the number of students who started the study programme at the higher education institution. Although this appears to be a straightforward calculation there are several problems associated with defining who actually completed and who actually started the programme. Here switching between programmes and/or institutions needs to be considered. Also the time frame for analysis needs to be set (Chalmers, 2010). Usually, completion rates refer to a selected entrance cohort and a point in time when it can be assumed that most students would have completed their study programme (for example one to two years after the nominal study time).

A further important indicator is the retention or continuation rate. This refers to the number of students who after entering and starting the study programme, re-enrol in subsequent years of the study programme. One major problem in calculating retention

or continuation rates is that may include students who are actively studying for a degree (i.e. they re-enrol but they are not gaining credits).

Drop-out rates refer to the number of students who leave the study programme/higher education system. Similar to the completion rate the major issue with this indicator is to identify the two groups of students that need to be compared for this indicator. Also, the definition of “leaving higher education” is problematic as students might only leave temporarily (“stop-out”) – but over what time period is it reasonable to measure this?

Switching or transfer rates measure the number of students that change their programme of study or higher education institution. Again, here the basis for the calculation is mostly the entrance cohort. Transfer rates are calculated for different points in time, but mostly they refer to the switch of students after the first year of study.

In terms of calculating the different indicators, different approaches can be taken to establish the reference group. As suggested, most often the entrance cohort is used as the reference or comparator group. However, Lee and Buckthorpe (2008) point to the fact that entrance cohorts can be easily fragmented due to different factors like students changing subjects and/or their status (from full-time to part-time and back to full-time). Another complicating factor is that study programmes with a high degree of flexibility might allow students to study for a much longer period than the average time to degree. Therefore definitive drop-out or completion rates can only be calculated after some years, when all members of the respective entrance cohort have left the institution or study programme. Although these figure might be more accurate, they do not reflect the current situation: “A non-completion rate calculated after this length of time may cease to have much relevance to the current conditions on the course and, hence, is of limited value as a performance indicator” (Lee and Buckthorpe, 2008).

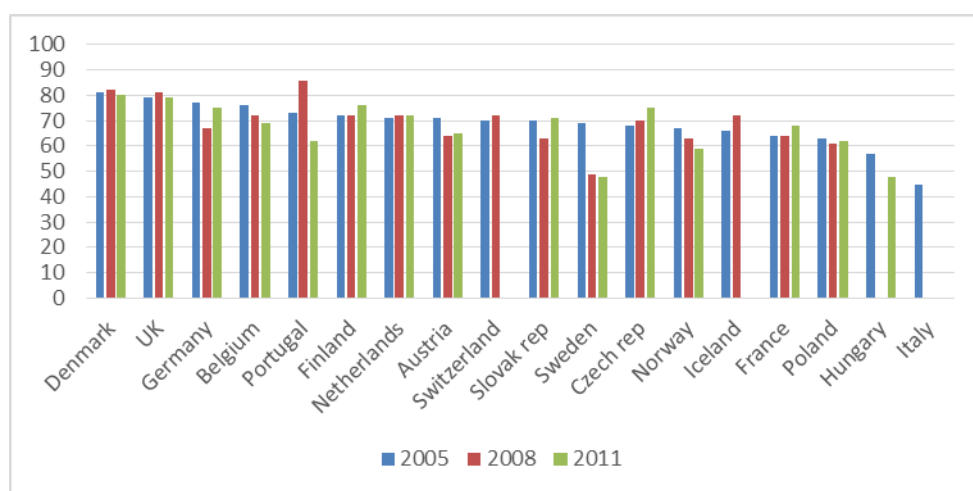
To overcome these problems some authors have proposed to calculate study success rates based on exit cohorts. Exit cohorts are defined as those students who leave the university or study programme in the same year. These students can leave for different reasons: they may have completed their study programme, failed or withdrawn for other reasons. So completion rates or failure/withdrawal rates can be calculated. Lee and Buckthorpe (2008) as well as Johnes (1997) both indicate that calculating completion rates and similar indicators based on exit cohorts has certain advantages to calculating them based on entry cohorts. In particular, the fact that only a limited time-lapse is required to make the calculation and consequently this ‘completion’ rate can assess the current situation of a study programme or higher education institution.

We will now consider the international data currently available on study success, and discuss this in relationship to other, newer research findings on rates of drop-out. As discussed, there are many ways of defining study success, but the most commonly used international data on completion rates in tertiary education, is published by the

OECD in *Education at a Glance*¹. The data collected by the OECD has also been used by EACEA/Eurydice (European Commission/EACEA/Eurydice 2012) in a report on the Bologna process in higher education (data from 2005), and was also used in the NESET report (Quinn, 2013) as a measure of completion.

The indicator “completion rate” collected by the OECD is not calculated the same way in all countries due to differences in the availability of data. Some countries provide data on true cohorts, while other countries provide cross-sectional data. The latter way of collecting data assumes that there are constant flows in higher education. Not all countries can provide data on all indicators, but the figure below gives an overview of data available in *Education at a Glance*.

Figure 1: Completion rates in European countries from OECD’s Education at a Glance.



Data source: OECD Education at a Glance 2008, 2010 & 2013 (data from 2005, 2008 & 2011)

The figure shows that there are variations between countries in completion rates, but that the rates within a country are usually quite stable over time. Very large variations over time within a country might be due to changes in the definitions of completion used, or different groups of students included or excluded from the definition. The figure shows that most European countries have completion rates in the range of 60 to 70 per cent. However, Denmark, the UK and Germany have higher rates, around 80 per cent, while Italy, Hungary and Sweden have lower rates although these may have improved since 2011.

An analysis using data from PIAAC, OECD’s Programme for International Assessment of Adult Competences², gives a partly different comparative outcome when it comes to drop-out rates in higher education (Schnepf, 2014). In contrast to other data on completion and drop-out from OECD, the PIAAC information on drop-out is self-reported through a questionnaire. Hence, individuals can define themselves as drop-outs or not, and since the PIAAC survey was administered to adults aged 20-64 they have had a longer time-span to complete their degree than the time-span commonly assumed in statistics on completion or drop-out rates. Not all OECD countries

¹ *Education at a Glance* is published yearly by the OECD Directorate for Education and Skills, see <http://www.oecd.org/edu/>

² For information on PIAAC see <http://www.oecd.org/site/piaac/>

participated in PIAAC. Data on self-reported drop-out rate are available for the following European countries for 2011: Belgium (Flanders), Czech Republic, Denmark, Finland, France, Ireland, Italy, the Netherlands, Norway, Poland, Slovak Republic, Spain, Sweden and the UK. (The relationship is illustrated graphically in the paper, see Schnepf 2014: 33).

The PIAAC study reports drop-out rates as the share of students ever enrolled in tertiary education. Italy has the highest drop-out rate at 33 per cent, followed by the Netherlands with 31 per cent and Spain and Czech Republic with 28 per cent. At the other end of the scale, the countries with the lowest self-reported drop-out rate are the UK at 16 per cent, Norway at 17 per cent and France, Sweden and Slovak Republic, all with 19 per cent. Schnepf (2014) compares the self-reported drop-out rates among working-age adults from PIAAC to drop-out rates in the student population, as presented in *Education at a Glance* (2013). An interesting finding is that the drop-out rate measured for students in Belgium, Czech Republic, Denmark, Finland, France and the Netherlands is fairly close to the drop-out rate reported by working-age adults. For Sweden, Norway and Poland the rate of self-reported drop-out among working-age adults is much lower than drop-out rate reported in *Education at a Glance* (2013). Norway and Poland are also among the countries that have the highest share of adults studying.

Schnepf's (2014) article also investigates the share of self-reported drop-outs that have completed a degree later in life, and finds some interesting patterns. Italy has a high rate of drop-out in general, and relatively few (8 per cent) of those that have dropped out complete a degree later in life. In the Nordic countries, more than half of all those that drop-out return to tertiary education and complete a degree. This is of course one factor contributing to much lower rates of drop-out observed in Norway and Sweden in PIAAC-data compared to the data presented in *Education at a Glance* (2013). And this finding highlights some of the challenges in establishing accurate measures of completion.

In addition, these findings also indicate the importance of the higher education system in a country and age-related patterns of attendance in higher education, particularly for explaining country differences in drop-out and completion rates. It also draws attention to the fact that the way completion and drop-out is measured, and when it is measured, might have an impact on rates. Countries where students spend longer completing a degree or where students shift programmes or institutions more often may be regarded as countries with high drop-out even though this is just a sign of an alternative pattern of degree completion. These are important findings to consider when creating measures for study success.

3. Factors impacting on study success

Here we review those factors that influence – either positively or negatively on study success and drop out. In the research literature, a range of different variables influencing study success have been identified. Enablers of study success may exist at different levels: the individual level, the institutional level, and the higher education system level, as well as the labour market may influence study success. These are described in more detail in the following sections. The review starts with research about the national level and higher education systems, it then moves to variables at the institutional and then at the level of the individual student. The review also investigates research on the potential influence of labour markets on study success and drop out.

3.1 National system factors contributing to study success

There are great variations among the European higher education systems, both concerning access to higher education, the structure of higher education, and the cost of higher education. Consequently are there several aspects of the higher education system that may contribute to promoting study success for students, for example how selective or how flexible the higher education system is, as well as the type of student financial support available, and if tuition fees are charged.

Selectivity of the higher education system

There are distinct differences between countries in terms of how selective their higher education system is. In some countries (e.g. Germany and Spain), students who successfully complete upper secondary education automatically have the right to access to higher education in their chosen field of study and institution. In Spain, law regulates this right, but because places in higher education are allocated based on admission marks set by (average) grades obtained in upper secondary education and success in the university entrance exam, in practice, Spain has a selective system (European Commission/EACEA /Eurydice, 2014, p. 20). In Germany, in some study programmes and disciplines students are selected by the institution or the faculty. Here institutions have – in some of federal states – the right to establish a *numerus clausus* or *numerus fixus* to regulate enrolments for selected study programmes. For some study programmes like medicine, veterinary medicine or pharmacy study places are distributed by a national agency based on the average degree of the Abitur and the so-called 'Wartesemester' (Stiftung für Hochschulzulassung).³ Other systems have a strict hierarchy between institutions, where some institutions are selective and only grant admission to the most able, while other institutions apply 'widening participation' and accept many, if not all, of their applicants. In France, the open admission policy applies to university education, while admission to the *grand écoles* is very competitive (European Commission/EACEA /Eurydice, 2014: 20). The UK also has a hierarchical higher education system, where some institutions are very selective and others are practically open to all that have completed secondary education.

³ The number of semesters an applicant has been waiting since she/he graduated from upper secondary education.

There are also differences between countries in how many entry routes there are to higher education. In Italy, Greece and many of the Central and Eastern European countries there is only one entry route to higher education, while many in Western Europe countries have alternative routes to higher education, other than completion of upper secondary school (European Commission/EACEA /Eurydice, 2014: 22). Alternative routes to higher education may increase opportunities for more non-traditional students to enter higher education, but may also create a challenge to completion, as these students may not be as well prepared for higher education as those that completed upper secondary education directly preparing for higher education. Analyses of students that entered higher education based on documented non-formal learning in Norway indicate that these students do less well in higher education than ordinary students, even when controlling for the fact that students entering based on non-formal learning come from less educated family background. In addition, many of them have family or work obligations (Helland, 2005). Hence, opening up admission to students who have not entered through the regular admission routes will, in some circumstances (e.g. no alternative adequate preparation/support of the students), have consequences for drop-out and completion (Helland, 2005). This illustrates the tension between widening participation and completion.

Flexibility of the higher education system

Another aspect of the higher education system that might influence drop-out and completion is the flexibility of the system (Houston, McCune and Osborne, 2011). Flexibility can be defined as the opportunity to move between programmes and institutions and to transfer credits from one degree-program to another. Flexibility can have positive as well as negative consequences for study success: In several of the Scandinavian countries, credit transfers are widely accepted, which means that students can start one degree and then switch to another, and still be able to use all or at least some of the credits they have already acquired in their new course. This means that students that find out that they were not that interested in the programme they first started, get the opportunity to choose again, without the costs of reorientation being too high. By contrast, in the UK, credit transfer is not widely accepted. In the UK students often indicate that they left their higher education programme because of an incorrect choice of programme (Yorke and Longden, 2004); this is more often than in Norway (Hovdhaugen and Aamodt, 2009), although it is not possible to compare study success directly between the two countries. However, flexibility also allows students to move easily between programmes and institutions, which in turn might cause study delays and will increase the time spent in higher education to complete the degree. In Norway, Sweden and Denmark students usually spend quite a long time to complete a degree, and this is partly due to the opportunity to change courses along the way (see for example Hovdhaugen, 2012; Danish Ministry of Higher Education and Science, 2013). This implies that while flexibility might be a remedy against drop-out (students reorient to another programme), it may also contribute to increasing time spent to get a degree, which can be regarded as inefficient

Student financial support and tuition fees

There is considerable variation between European countries in tuition fees, some countries have no tuition fees (e.g. Nordic countries), some have fees only for students repeating courses or studying for an extended period of time (e.g. Croatia) and some have tuition fees for all students (e.g. England). There are also great differences in the level of the tuition fees, as well as in student financial support systems. In OECD's Education at a Glance (2011) countries are grouped in four categories according to tuition fees and student support systems. The Nordic countries are an example of countries with no tuition fees and a generous financial support system; the Netherlands and the UK as an example of countries with high tuition fees and well-developed student financial support systems; while low tuition fees and a less developed financial support system can be found in Austria, Belgium, the Czech Republic, France, Ireland, Italy, Portugal, Spain and Switzerland. The fourth category the OECD identifies is high tuition fees combined with less developed student financial support, which only applies to Japan and Korea (OECD, 2011: 228ff).

However, according to an earlier publication of Education at a Glance there is no direct link between the level of tuition and completion rates (OECD, 2008). On the one hand it is argued that students that pay for their education may be more committed to completing their education, as they pay to attend, than those students paying nothing. On the other hand, the fact that students have to pay tuition fees may also contribute to slower completion due to a need to engage in paid work while studying, or even to leave higher education because they are unable to meet the costs. However, there is little research suggesting that tuition fees force students to leave higher education, although there is evidence, that without some appropriate student financial support, tuition fees hinders access to HE for some student groups (Fitzsimons, Dearden and Wyness forthcoming). So the picture about the role of tuition fees is complicated by the nature of the student support in place.

3.2 Factors' impact on study success at the level of the HE institution

Much of the research on improving student completion and success, especially in the US, points to the role of the HE institution. Here procedural as well as structural aspects are investigated.

This review of European literature identifies the following cross-cutting issues which contribute to at the institutional level:

- Institutional commitment and strategy;
- Social integration and student support services;
- Matching of students and programmes;
- Clear expectations about study programme,
- Clear expectations about learning, teaching and assessment; and
- Monitoring and tracking students.⁴

⁴ As these institutional enablers that describe procedural aspects are mostly institutional policies they will be briefly described in the following section. An extended description will be presented in the sections on policies.

Procedural aspects of higher education institutions

Institutional commitment and strategy

In the UK context, Yorke and Longden (2004) found that a key factor contributing to improved rates of retention and success is HE institutions' commitment to this issue. Thomas (2012) also identifies the importance of institutional commitment to student engagement and belonging across the student lifecycle, and recommends that "The commitment to a culture of belonging should be explicit through institutional leadership in internal and external discourses and documentation such as the strategic plan, website, prospectus and all policies." (Thomas, 2012: 10). Based on the evidence from seven projects and 22 higher education institutions she recommends that institutions should pay attention to issues like prioritizing and making 'belonging' an essential part of leadership as well as of all staff members. Belonging refers to the students' identification and integration with their institution. Also the early development of student engagement, the monitoring of students' behaviour and progress, and a holistic approach to institutions engaging in study success, are seen as important steps in building a culture of belonging at the institutional level. The choice and organisation of academic programmes; the priority given to study success and the associated expenditure; the provision of additional support; can also contribute to study success at the level of the institution. An institutional commitment to the success of its student population, irrespective of its diversity, is likely to result in higher levels of internal monitoring (discussed below) and a more inclusive approach to learning, teaching and assessment, discussed below. Similarly, Dutch research (Inspectie van het Onderwijs, 2009) identified that successful institutions in terms of study success have a strong culture in teaching that is supported by the management boards of the institutions and have implemented a comprehensive approach to teaching, i.e. are active in implementing teaching policies such as the professionalization of teachers, small scale teaching, and close supervision and advise for students. For Dutch institutions the matching of students and programmes, the use of small scale teaching and close supervision have also proven to be successful instruments to increase student retention.

Social integration and student support services

Creating a culture of belonging and HE institutional commitment to students is at the heart of successful retention and success in HE for all students (Thomas, 2012) (see also Tinto, 1975 who finds this to be the case in the US context) to explain student retention. This approach argues that the strength of a students' social and academic integration accounts for the probability of a student remaining in the institution or study programme and successfully completing their studies. In particular, interaction with academics and peers give students the chance to internalize social and academic values and to integrate into the academic and social communities of the HE institution.

This is most effectively nurtured through mainstream activities that all students participate in. In Norway, Hovdhaugen, Frølich and Aamodt (2013) found that this is the approach most institutions also choose. The academic sphere is the most important site for nurturing participation of the type which engenders a sense of belonging, and thus academic programmes and high-quality student-centred learning

and teaching are a primary focus for effective student retention and success. Analysis of effective approaches to improving retention and success (Thomas 2012) demonstrate that student belonging is achieved through supportive peer relations, meaningful interaction between staff and students, developing knowledge, confidence and identity as successful HE learners, and a higher education experience relevant to students' interests and future goals.

Besides the academic integration, the social integration of the student with peers also has an influence on study success (Thomas, 2012). This finding is echoed in research in other countries, such as Germany (Georg, 2009) and Norway (Frølich, Hovdhaugen and Aamodt 2013). Student support services similarly have an impact on improving student completion and success. Student support services include a number of different activities like pre-entry preparation, study skills development, pastoral support, counselling, financial planning and budgeting skills, health services, disability support, career guidance and much more. To date, the contribution of this wide range of student support services to study success is relatively under-researched and poorly documented. Nonetheless, evidence on the effect of student support services – both academic development and pastoral support – suggests that support should be targeted, e.g. by discipline or by student group (e.g. Sellers and Van der Velden, 2003; Cahalan, forthcoming). Other authors claim that support should be integrated into the curriculum (Powney, 2002; Warren, 2003; Thomas, 2012). Woodfield and Thomas (2012) and Duty (2012) found that many students are unaware of centralised and generic student support, and/or choose not to use it, particularly those students who would benefit the most.

Matching of students and programmes/clear expectations about study programme

The congruence between expectations about the study programme, the capabilities of the student, and the realities and requirements of the study programme have a crucial impact on study success and drop-out. Much of the scientific literature reviewed here has identified the need to improve student expectations and to ensure there is a match between the student and his or her study programme. Research from Austria (Unger *et al.*, 2009), Flanders (Goovaerts, 2012), Germany (Heublein, Schmelzer and Sommer, 2008), the Netherlands (Meeuwisse, Severiens and Bron, 2009), Switzerland (Wolter, Diem and Messer 2013) and UK (Lowis and Castley, 2008) point to the need to improve the process of decision making and study choices to reduce the number of incorrect or inappropriate choices and to improve the match between student and their study programme.

In the UK context, this is extended to improve not just study choice but also study expectations. For example Hamshire, Willgoss, and Wibberley. (2013) recommends that clear guidance regarding staff–student commitments and the requirements of degree level study should be made available to all students early on in their programme to help set reasonable expectations. Charlton, Barrow and Hornby-Atkinson (2006) argue that there should be more emphasis on making independent study expectations explicit, and developing skills for independent study. (See also Unger *et al.* (2009) for a discussion of effects of unmet expectations on drop out of students in Austrian higher education).

Besides knowledge about the study programme and building the right expectations, the time of application for a programme also has an influence on the students' commitment to the programme. For the Netherlands, Warps *et al.* (2010) found a high correlation between late applications (within one or two months of starting a degree programme) and the extent to which students feel connected to a study programme and their perception of the likelihood of graduating. In response to the results of this study, different soft selection mechanisms have been implemented in the Netherlands aimed at better information and better matching. Among these are early information campaigns, intake interviews and binding study advice that will be described in the sections on national policies below.

There is a huge variety in how the process is organized: Besides test in high-schools or by independent agencies (e.g. in the Netherlands), matching students to programmes can also be organized on the institutional level.

Learning, teaching and assessment

Evidence from across Europe (and also Australia and the US) points to the importance of learning, teaching and assessment within academic programmes (see for example Georg, 2009 and Thomas, 2012). Blüthmann, Lepa and Thiel (2008) distinguish between the impact of the academic requirements of study programme and the impact of the context in which learning takes place as factors contributing to student drop-out. A German study (Ramm, Multrus and Bargel, 2011) about the views of students who were considering withdrawing or changing their study programme, found that most of the reasons for this decision were linked to the academic experience. In particular, students wanted more intensive supervision and feedback from teaching staff; greater academic preparation through pre-entry and/or freshmen preparatory courses, and changes to the assessment process.

This connects to the broader point made by Ulriksen, Madsen and Holmegaard (2010) that not only is pedagogy important, but so too is the culture of the HE institution. In particular, the focus should not be on identifying and rectifying 'the student deficit' and on any skills students may lack, but rather on the culture and values of the academic staff. This perspective is developed in work in the UK on inclusive learning, teaching and assessment (Hockings, 2010).

More student-centred and active learning approaches give priority to the role of students in their own learning. Indeed there is a growing body of evidence that emphasises the importance of student involvement or engagement (e.g. Krause, 2011; Thomas, 2012). This is most effectively achieved through student-centred active learning approaches, coupled with more explicit assessment practices which are formative rather than merely summative.

Tracking and monitoring of students and study success

As noted above, an effective student completion and success strategy includes the tracking and monitoring of students; this is intended to reduce the number of students who drift away, especially in their first year (Quinn, 2013). In Norway, Hovdhaugen, Frølich and Aamodt (2013) reported that following the funding changes in Norway which linked HE institutional funding to student completion, there has been greater

monitoring of students via academic records. Tracking students provides the institutions with the chance to detect in an early stage students that have a high risk for dropping out. Data itself will not improve study success, but rather it needs to be acted on in real time through interventions designed to improve completion and success (Heublein, Schmelzer and Sommer, 2008; Thomas, 2012). In the UK context, Buglear (2009) finds that poor data often underpins the institutions' inability to intervene adequately to improve retention. This includes data about which students are at risk of withdrawing, evidence about which approaches are effective, and real time data that allows timely and effective interventions.

Structural aspects of higher education institutions

In the US context Chen (2012) distinguishes three structural aspects of higher education institutions that are crucial for study success and to reduce drop-out; the composition of the student body at the institution; the degree of selectivity of the institution; and the composition of faculty and the student/faculty ratio. Also internal spending, i.e. how much money is spent on student support in relation to other areas, has an impact on study success. These are relevant for European HE, where research on institutional factors is less common.

Composition of the student population

Student characteristics such as socio-economic background, gender and ethnicity correlate with study success trends, and are discussed in more detail below. Thus, the composition of the student population within an institution will have an impact too. Research revealed that at the level of study program, the probability of dropping out is higher for members of minorities in unbalanced study programs than for individuals who participate in study programs where the student population is more or less balanced, i.e. different groups are represented equally in the student population (Meeuwisse *et al.*, 2010, Severiens and Dam, 2012). At the institutional level, a heterogeneous student population also has positive effects on study success. Kuh *et al.* (2006) in the US, summarize the results of different studies on diverse student bodies as follows: "Students who have more frequent experiences with diversity also report "more progress in personal and educational growth, more involvement in active and collaborative learning, and higher levels of satisfaction with their college experience" (Kuh *et al.*, 2006: 54). This outcome differs by the type of institution and the extent to which interaction among students is possible.

Size and selectivity

The size of an institution does not have a direct impact on the dropout of students. Size acts as an intervening variable that is mediated by other impacts (Kuh *et al.*, 2006: 53). Different studies reveal that small institutions have more capacity to engage with students (e.g. Berger, 2002). In addition, the social integration of students at small institutions is stronger as students are more likely to have closer relationships with their teachers than at bigger institutions. Hence, students at small institutions – all other things being equal – are more likely to complete their studies than students at larger institutions.

The degree of selectivity of an institution on the other hand has a negative impact on the probability of students to drop out, i.e. the more selective a higher education institution is, the more likely is study success. Study success is associated with students' prior academic attainment, so institutions with the highest entry requirements have lower rates of drop out in comparison to those at institutions with lower entry requirements. In a multi-level study of the impact of the institutional context on attrition rates, Titus (2004) found that institutions that select students on their academic ability are able to create a peer climate that is beneficial to the selected students as they are more likely to integrate and to persist in their study program (Titus, 2004: 692). The degree of selectivity also has an impact on the added value of other institutional activities to increase student support. In a study on the relationship between institutional expenditure on instruction, academic support, student services, institutional support and institutional grants and graduation rates Gansemer-Topf and Schuh (2006) found these measures produce different results depending on the degree of selectivity of the institution: "For low selectivity institutions, amount of institutional support expenditures did not have a direct effect on graduation rates. For high selectivity institutions, percentage on institutional grants did not have a significant effect on graduation rates. Percentage of expenditure for student services did not have a direct effect on graduation rates." (Gansemer-Topf and Schuh, 2006: 629).

Institutional expenditures

Chen (2012) discerned in his US study on institutional characteristics that institutional expenditure on selected areas has a significant impact on the dropout and graduation rates of higher education institutions. In particular, institutional spending on student services does have a positive effect, while expenditures on instruction and academic support are less important. Investments in the social environment have a positive effect on the graduation rate: "In sum, findings at the institutional level seem to suggest that institutional financial resources emphasizing students' social development outside the formal instructional program may promote college student persistence at their first institution" (Chen, 2012: 500). The relative impact of spending on different institutional priorities will be explored through the empirical institutional case studies.

Study organisation

The organisation of the study comprises the infrastructure and the resources that are provided for teaching as well as different aspects of the quality of teaching. In a study on student drop-out in Germany, Heublein *et al.* (2003) found that poor study conditions, like lack of supervision, contact and educational resources, might contribute to the decision to stop studying but mostly do not serve as a main reason for dropping out. Here bad study conditions negatively affect students who have to deal with low achievements, lack of motivation and problems to cope with difficult situations (Heublein *et al.*, 2003: 70). The degree of bureaucracy in the study organization can also have an impact on study success. Again, the degree of bureaucracy works as an intervening variable as it has an impact on the way freshmen are socialized at universities or higher education institution upon their arrival. In

particular, the effective communication of rules and regulations has a positive impact on students' integration and study persistence (Kuh, 2006: 55).

Another aspect of the way in which study is organized which may impact on study success is the differentiation between full and part time study. In many countries this is not recognized, or has a different meaning. In the UK however part-time students can study at a slower pace or intensity than full-time students. The National Audit Office report (2007) found that of students starting courses in 2004-05 90.6 per cent of full-time students continued into a second year of study (including 91.6 per cent of those studying for a first degree); and 61.9 per cent of part-time students continued into a second year of study (including 76.9 per cent of those studying for a first degree). Forty-seven percent of part-time, first-degree students had completed within six years, whilst at that point 44 per cent had left education without qualifying. This report stimulated a review of the completion of part-time students (HEFCE 2009). They report the diversity and flexibility found in part-time provision make the data difficult both to capture accurately and interpret. In addition, identifying the study intentions of a part-time student is difficult: whether a student intends to complete a module or modules for institutional credit as opposed to a first degree. HEFCE analysis has shown that the completion rates among entrants studying at and above 30 per cent of the intensity of full-time study are substantially higher than those among entrants studying at lower intensities. Forty-four per cent of students commencing programmes at UK HEIs (other than the Open University) at 30 per cent or higher intensities go on to complete that programme within seven academic years (rising to 48 per cent within 11 academic years). For those studying at below 30 per cent intensity, 18 per cent have completed after seven academic years (rising to 22 per cent within 11 academic years). The equivalent proportions for entrants to institutional credits and first degree programmes at the Open University who complete within seven academic years (and 11 academic years) are 17 per cent (24 per cent) for those studying at the higher intensity and 10 per cent (15 per cent) for lower intensities. Increasing intensity of study between the first and second years of the programme substantially increases the likelihood that a student with an intensity of 30 per cent or below in the first year goes on to complete their degree within 11 academic years. This likelihood rises from 27 per cent to 46 per cent for UK HEI (non-Open University) entrants, and from 24 per cent to 36 per cent at the Open University. (HEFCE 2009). Bennett (2008) finds that students studying through different modes have different support needs, which might contribute to explaining these lower rates of study success for part-time students, while Callender (2006) identifies the importance of the poor financial support for part-time as opposed to full-time students.

3.3 Individual level factors impacting on study success

Investigating student characteristics and their impact on study success and drop-out is a central element of research on study success, particularly studies that investigate the reasons why students drop out from higher education. Individual characteristics, such as students' socio-economic (family) background, gender and ethnic origin are discussed.. Also the motivational dispositions and the cognitive competencies of students are considered. Here knowledge and expectations about the study programme play an important role. Finally, students' educational pathways have to be

considered when looking at enablers of study success and drop-out (i.e. their route into higher education, including alternative entry qualifications, age of entry and other experiences). While our discussion will examine all these issues, it should be noted that many of the influences on student success are inter-related. Moreover, not all the studies cited below controls for these interactions. In other words, they do not necessarily examine which factors have an independent association with the probability of dropout from HE.

Socio-economic (family) background

Within the scientific literature, students' socio-economic and family background are seen as among the most important factors influencing study success. As, the NESET report note, most studies indicate that students' socio-economic background is a major factor in completing a study programme (Quinn, 2013). The socio-economic status of a student can affect study success in different ways as it is related to the financial resources available while studying, to the symbolic resources available to the student to integrate into the academic community, and to their academic attainment prior to entry (Georg, 2009). Regardless of the kind of resources that students might be lacking, literature on the impact of the socio-economic family background of students provides evidence that those from lower socio-economic backgrounds are less likely to complete their study programs than students from higher socio-economic backgrounds (BIS, 2014).

In addition, UK grey literature shows that socio-economic factors also impacts on whether or not students: achieve a degree; get a good grade in their degree(first or upper second class degree); achieve a degree and continue to employment or further study; achieve a degree and continue to graduate employment (as opposed to any employment) or further study. For instance, students from disadvantaged areas tend to do less well in higher education than those with the same prior educational attainment from more advantaged areas: using Income Deprivation Affecting Children Index as a measure of disadvantage, 77 per cent of those from the most advantaged areas with high A-level grades (school leaving matriculation examinations) go on to gain a high score in their degree, but this figure drops to 67 per cent when similar students from the most disadvantaged areas are considered. (HEFCE, 2014) Other research (HEFCE, 2013) suggests that those from disadvantaged areas tend to do less well than those from advantaged area are less likely to complete their degree course, get a good grade and have good employment outcomes once they complete their degree.

In terms of financial constraints, different studies show that students from a lower SES background more often have to interrupt or stop their studies because they lack sufficient financial means to continue. Often, these students were distracted from their studies because they had to engage in paid work for too many hours alongside their study (Heublein, Spangenberg and Sommer, 2003: 46 ff). This evidence is also reported by the country experts in the grey literature for a number of European countries including Austria, Bulgaria, Croatia, England/UK, Estonia, Flanders, Germany, Italy, Lithuania, Macedonia, Poland, Romania and Spain.

Students' socio-economic family background also has an impact on study success in terms of their access to social and cultural capital. Following Bourdieu's ideas, these studies demonstrate that students who grew up in a family with parents who also completed higher education have more resources in terms of social and cultural capital available to integrate into higher education and academic communities and thus to successfully complete a higher education qualification. The impact of social and cultural capital has been widely studied in the scientific literature. It particularly plays a role in those countries, such as the UK, France and Germany where socio-economic class still imposes barriers to social mobility (e.g. Georg, 2009; Reason, 2009). On the other hand, these studies also report that students from lower socio-economic family backgrounds not only lack resources to fully integrate into the academic community, but also lack the support of their family and the provision of external motivation.

In the grey literature, the role of socio-economic variations in cultural capital and support from the family in study success has also been studied. Besides the countries already mentioned, family background appear to play an important role in Bulgaria, Croatia, Flanders, Italy, Lithuania, Macedonia, Poland, Romania and Spain. These studies confirm that a lack of moral support from the family is a problem for students from non-traditional backgrounds (i.e. first generation entrants).

Gender

In many countries, female students outnumber and outperform male students, and there gender divisions in along discipline lines. Different scientific studies have shown that gender is an important determinant of study success. Females seem to be more successful in completing their higher education degrees than males and appear less likely to switch their study programmes. However, while these gender differences exist, it is not gender *per se* that for instance, leads to a higher study success for females than males. Rather these gender differences arise from other underlying and interacting variables.. For example, gender strongly interacts with other individual characteristics like coming from an ethnic minority or socio-economic status (Reason, 2009: 490). Further, as we will see below, the institutional context as well as the study programme are pivotal for study success. In those contexts where one gender group is a minority in the study programme (e.g. females in male-dominated fields of study/study programmes or males in female-dominated fields of study/study programmes) drop-out or course switching is more frequent among the minority students (Severiens and Dam, 2012). Females and males also report different reasons for dropping out from higher education or switching study programme. Females more often report reasons such as lack of interest or motivation for the study programme, while males indicate a lack of aptitude and capabilities to follow the programme. For males, the moral support of their families also plays an important role in successfully completing their study programme, in particular when they are following female dominated programmes.

Ethnic Origin

Ethnic origin is also a determinant of study success that strongly interacts with other individual student characteristics, especially with students' socio-economic background and gender (Reason, 2009; Reisel and Brekke, 2010). For example, in Bulgaria the

study success of Roma students has been investigated (Tilkidjev *et al.*, 2011). It shows that Roma students appear less likely to succeed than non-Roma students but this is associated as much with their social class origins as their ethnic origin. Also in the Netherlands the more frequent drop-out among students from ethnic minorities was related to a lack of financial and cultural resources but also to a less well-informed study choice compared to students from majority groups (Meeuwisse, Severiens and Bron, 2009). Studies in Germany show similar patterns (Heublein, 2010).

Some studies find that membership of an ethnic minority group intersects with low socio-economic status. For example, Roma students in Bulgaria (Tilkidjev *et al.*, 2011) and minority students in the Netherlands and Germany (Heublein, 2010; Meeuwisse, Severiens and Bron, 2009). In the Netherlands the higher drop-out by students from ethnic minorities was related to a lack of financial and cultural resources, and less well-informed study choice compared to students from majority groups, rather than ethnicity *per se*.

Despite the findings from these studies, and others examining the interaction of ethnicity, social class, and gender there is no general pattern or consensus on how, and if, these three variables affect study success or drop-out. As important in determining study success are the interactions of ethnicity with: the context of the institution; the preparation of the student for the study; an informed study choice; and the stratification of the educational system. In those countries where different educational pathways are available to access the labour market, students from minority groups drop-out less often from higher education as they have chosen other educational pathways and have made more reflective study choices.

Socio-economic background, gender and race/ethnic group do not serve a significant predictors when estimating the probability of retention or college dropout. Either strong interaction effects between the three as well as with other factors like cognitive competencies or motivation have to be considered. In particular the interaction of gender and ethnic group with socio-economic status is strong: Here the socio-economic status reduces the impact of the two. The availability of financial and cultural resources seems to be a major impact on the probability of study retention. Also the composition of the student population as regards the relation between minorities and majorities plays an important role for study success. When using these three background variables interaction effects as well as the composition of the student population should be considered.

Grey literature in the UK shows for UK-domiciled entrants to full-time, first degree courses in 2002-03 there was a large difference between the ethnic groups in the proportion of young final-year students awarded a good degree grade (first or upper second class degree). White finalists had a rate 25 percentage points higher than the rate for Black finalists, and 20 percentage points higher than Pakistani and Bangladeshi finalists. Some, but not all, of these differences can be explained by the differing profiles of the students (HEFCE, 2010).

Cognitive competencies and motivational disposition of student

The preparedness of the student for higher education is a further major topic in the field of study success and drop-out. Besides the socio-economic family background, the competencies of the student are seen as major determinants for study success. In the literature different predictors of cognitive competencies and the academic attainment of students are used, including for instance, the final school grade/examinations or competences like diligence, motivation and capacity to concentrate. In general, studies demonstrate that students who were low achievers in high school are more likely to drop-out of their study programme. Different studies in Germany, UK, and Spain confirm this relationship (Lassibille and Gomez, 2008; BIS, 2014; Heublein, Spangenberg and Sommer, 2003). For example, in the UK, undergraduate students who had lower levels of educational achievement on entry to university were more likely to have dropped out than those with higher levels of achievement. Students with a tariff score of less than 240 points were approximately twice as likely to have dropped out in comparison to students with a tariff score of 360 points or higher. The study used a series of regression analyses to examine which factors had an independent association with the probability of dropout from HE. The results showed that among entrants to HE aged under 21 years, the respondents' prior level of academic achievement explained the higher odds of dropout for respondents from disadvantaged family backgrounds. Socio-economic background was no longer significantly associated with the probability of dropout from HE after taking into account the academic achievement of students from different backgrounds (BIS, 2014 p 9).

Besides cognitive readiness, student motivation and different aspects of self-motivation, self-esteem and self-efficacy also have an impact on the probability to complete a study programme successfully. Students who score low on one of these aspects are particularly at high risk for drop-out.. In Finland for example, it was found that students who were committed to the content of the study programme, its academic culture, the more instrumental aspects of their study programme and/or their career interests, were more likely to complete their study programme than students who only had low commitment to the programme or career interests (Mäkinen, Olkinouora and Lonka, 2004). Also in a study among Norwegian students, it became clear that students who have high interests in the study programme and/or in later careers are more likely to remain in the same institution and not to transfer to a different institution (Hovdhaugen, 2009).

These results lead to a further determinant of study success: a number of studies as discussed above revealed that having the right information and realistic expectations about the study programme is crucial to the probability of completing the programme successfully. In particular, unmet expectations about the study programme lead to attrition. This relationship was also mentioned in a number of the national grey literature studies. Unmet expectations can be caused by different things, either students receive incorrect information or simply have a lack of information about the study programme, or students have an incorrect self-estimation of their capabilities to follow the study programme. The study of Heublein, Spangenberg and Sommer (2003) revealed evidence in Germany that incongruence between students' expectations, the reality of the programme and students' abilities led mostly to drop-out. Similarly a

recent UK study that controlled for a large number of variables shows that students who had used fewer sources of advice in applying to HE and those who gave less positive ratings of career guidance were more likely to have dropped out of HE than remaining respondents (BIS, 2014).

Student's educational pathway

Finally, the educational trajectory of students has proven to be a variable that has an effect on drop-out. Here students with straightforward educational trajectories are more successful in higher education than students who for example repeated a year in secondary school or who followed indirect pathways. In this respect, it was also investigated whether the completion of vocational training before entering higher education has an impact on successfully completing higher education. Here no clear relationships have been revealed. For Germany, having completed a vocational training before entering higher education does not have an effect on the successful completion of a study programme (Heublein, Spangeberg and Sommer, 2003). In Spain, on the other hand, students with a VET certificate were more likely to drop-out of their study programme (Lassibille and Gomez, 2009). In the Netherlands, students with a vocational qualification particularly drop out sooner from Universities of Applied Sciences.

3.4 Factors linked to the labour market

The labour market situation in a country may well influence participation rates in higher education as well as completion and drop-out rates. The labour market serves as a target for higher education and functions as a competitor to higher education. Countries with tight labour markets that do not provide sufficient entry positions for school leavers have to face the fact that enrolment in higher education is seen as a transitory stage or parking lot for some students waiting for an entry position in the labour market. In addition, part-time jobs that help students to finance their studies may threaten study success when students become distracted from and delayed in their study programme.

Higher education as a parking lot

If young people feel that they are unable to get a good job unless they have a higher education qualification, this might work as an incentive for students to start a higher education degree, even though they may not be particularly motivated. This is particularly true for countries like Italy and Spain where there is an insufficient number of jobs for school leavers. Becker (2001) argues that a large proportion of students in Italy enter higher education because they are unable to get a job with only an upper secondary education qualifications. Hence, if they are offered a job while studying these students will leave higher education and drop-out to take the job instead of completing the degree. Becker (2001) calls these students "parking lot students". Hence drop-out may be reduced in those countries where the labour market offers jobs to students with only a secondary education qualification, as they are less likely to enter university for motives other than obtaining a degree.

Working while studying

Engaging in paid work, especially during term-time, is another potential threat to completion because reliance on paid employment can have a negative effect on engagement in studies and study success (Vossensteyn, 2005; Vossensteyn *et al.*, 2013). However, the risk of drop-out or increased time to degree is related to how many hours students work while studying. Studies in Ireland, Estonia and Norway show that over 60 per cent of students work, but most of them work moderate hours (Darmody and Smythe, 2008; Beerkens, Mägi and Lill, 2011; Hovdhaugen, 2013). In both Estonia and Norway, analyses of the relationship between working hours and the risk of drop-out indicate that only students working more than 20-25 hours a week during term-time have a higher risk of drop-out (Beerkens, Mägi and Lill, 2011; Hovdhaugen, 2014). A similar number of hours worked and the associated risk of drop-out has been found in American and Canadian research too (Moulin *et al.*, 2012; Roksa, 2011). These findings across countries suggest that some paid work does not directly affect the risk of drop-out or delay completion, but that too much paid work might. Some students argue that they choose to work while studying in order to enhance their employability, as employers not only require a degree but prefer candidates that have some work experience. Hence, students work to differentiate themselves from other students by gaining working experience (Broadbridge and Swanson, 2005; Hodgson and Spours 2001). However, if the UK experience is typical, rarely are the jobs that full-time undergraduate students get during term-time related to their long-term career plans and their jobs on graduation. In the UK most students work in catering and retail sectors (Callender, 2008). If we see employability as a form of study success, some students might actually improve their chances of successful employment after graduation if they work moderately while studying. However, there is also evidence that paid work has a negative impact on another aspect of study success- getting good grades and a good degree grade. For instance, Callender (2008) in the UK found that students working the average number of hours per week (15 hours) were a third less likely to get a good degree grade, even when controlling for a range of characteristics including academic ability.

4 National policies

By the term national policy, we refer to instruments and regulations that have been implemented by national authorities to influence study success. These policies may be targeted at the national, institutional and individual level. They also might aim to overcome or reinforce the factors affecting study success and drop out described above in section 1.3.

To investigate the national policies that are currently implemented across Europe the following areas are examined. The national policies are described in terms of their goals, target groups, contents and expected effects. Here different policy areas are distinguished: funding related to retention and completion (section 1.4.2), student financing (section 1.4.3), organisation of higher education (section 1.4.4), learning and teaching policies (section 1.4.5), and finally targets and measurements (section 1.4.6). These policies need to be viewed within the national higher education context, and in particular the way in which study success is understood (see section 1.2 above)

The search for scientific literature revealed that there are very few studies about national policies aiming to improve study success and combat drop-out, and this was confirmed by the national experts. While there are a number of studies available about the factors influencing study success and drop-out, there are hardly any studies investigating national policies. Despite this lack of evidence on the effectiveness of national policies, this review will describe the expected impact of national policies, unless stated otherwise, this information comes from the expert country scans.

4.1 Understanding/definition of study success

As suggested above, study success has a number of different meanings ranging from the completion of a study programme/qualification to the successful placement of graduates in the labour market, in 'graduate' jobs. From the quick scan survey among national experts, it became clear that countries have different understandings of study success and that national policies reflect these diverse understandings of study success. A common feature in the national interpretations of study success is the successful completion of a study programme. While in some countries the mere completion of a study programme is considered a success, the term becomes stretched to include additional aspects in other countries. Among these the completion of a study programme in a specific time period was most important, and in a few countries completion with good grades also was seen as a success. Furthermore, the usability of a degree for finding a 'graduate' job or progression to post-graduate studies is included in some definitions of study success. Finally the progression of students to the next study year, i.e. re-enrolment is considered as study success. Besides the individual benefits also institutional or other aspects are included in the understanding of study success. Here high completion rates and also timely completion of a degree in a specified time frame are regarded as study success as they show an efficient use of resources.

Although some countries have similar study success goals, different strategies have been implemented at the national level. For example, Norway, Italy and Finland have all implemented reforms aimed at improving completion rates, and these reforms can be seen as different forms of country adaptation to the Bologna process (Ahola, 2012; Di Pietro and Cutillo, 2008; Hovdhaugen, 2009). Even though the reforms had the same goals, to decrease drop-out and improve completion rates, the strategies adopted to achieve these outcomes were not the same. This demonstrates the different problems countries were facing and the type of policies adopted to address these problems. In Norway and Finland, policies focused on reducing the time it took students to complete a degree, and in both cases a new three-year undergraduate degree was introduced. In Norway, one of the ambitions of the shorter bachelor's degree was for students to spend less time in higher education in total, while in Finland it was a way of providing a shorter degree for students who were not motivated to complete a master's degree. But the new bachelor's degree is not truly valued, and most students still chose to complete a master's degree. As a remedy for students spending a long period in the higher education system, Norway also introduced more structured programmes at universities, to get students to complete faster and enhance their employability. This had an impact on the number of students that switched to other programmes, but no did not have a significant effect on drop-out (Hovdhaugen, 2011). The Italian reforms on the other hand, introduced more flexible study programmes in addition to more resources spent on guidance and on an enhanced labour market orientation in the form of internship programmes for students. Analyses comparing cohorts before and after the reform revealed that these measures together contributed to a reduction in drop-out (Di Pietro and Cutillo, 2008).

4.2 Funding related to retention/completion

Steering by funding is the most powerful tool national authorities can use to incentivize higher education institutions to implement instruments that positively influence study success. This kind of steering can take various forms. First, performance-based funding where national authorities can reward as well as penalize higher education institutions for their achievements in study success respectively retention and completion. Secondly, providing additional resources to improve teaching and learning so that national authorities can incentivize higher education institutions to implement for example, innovative forms of teaching and learning or invest more in student support like counselling. These different approaches to institutional funding by national authorities which are related to retention and completion are described below.

Relevance of funding related to retention/completion across Europe

In several European countries, funding of higher education is, at least in part, explicitly related to completion rates. Most countries fund institutions for teaching and research, but "there is an international trend towards some of this block funding being dependent on outcomes measured against key performance indicators" (Bowes *et al.*, 2013).

NESET (Quinn, 2013) reports that in 15 countries the completion rate has an impact on the funding formula for higher education institutions, however there are changes

over time in funding policies. Through the country scans, countries such as Croatia, Estonia, Greece, Montenegro, Portugal and the Slovak Republic all indicated that they are reviewing how institutional funding can be used to improve completion and success or they are piloting the implementation of some kind of performance-based funding scheme. For example, the government in Greece wants to link funding to study progress because of large numbers of passive students, while Croatia and Estonia are about to implement funding that aims to increase the number of students that complete their study programme within the nominal duration of a programme.

Study success and performance-based funding

Introducing different forms of performance-based funding makes institutions more dependent on student completion and success. However, in mostly only part of the funding is related to outcomes and the outcomes of education is only one of several indicators. Usually part of the performance-based funding is also related to research output, but in our analysis of the results of the comparative overview will we focus on the part related to education/teaching and learning.

The general idea driving the integration of drop out or retention in the funding formula for higher education institutions is to stimulate them to care about study success and retention. Within these funding-related policies it is mostly left to the institutions to decide what instruments are implemented to improve study success, and in some countries these instruments are evaluated and rewarded (e.g. by performance contracts in the Netherlands, or additional funds for innovative concepts in teaching and learning).

In performance-based funds for education/teaching and learning, study progress can be measured by the number of credits achieved by students, which is done for example in Denmark and Norway, or based on graduation rates as in Austria, the Netherlands and Germany. In Ireland funding is based on student numbers, but institutions must submit an annual report on the number of students retained, and this determines income. This is also true in England, but since 2012/13 only in relation to the funding of some students. In Finland the system is based on several indicators: the number of degrees awarded, the number of credits, and graduate employment, and in addition the funding formulas differ for different types of institutions. In France, the numbers of graduates, as well as the number of students who re-enrol in the second or third year of their Bachelor programmes, are included in the funding formula. Flanders (Belgium) has a system that is partly based on input funding (number of students), and partly based on the number of credits and degrees awarded (output financing). This indicates that some funding systems are more complex than others, but generally there is a great variety of indicators used by countries that have performance-based funding. Therefore one of the outcomes of the country overview will be a mapping of the types of indicators used in different countries and an analysis of the extent to which they base the allocation of funds on input data (number of students) output data (different performance measures) or perhaps a combination of the two.

There are only a few examples of countries where the rate of withdrawal has a direct effect on funding, like institutional funding for teaching in Italy and in the Netherlands

considers student withdrawal and study success. However, in the Netherlands timely completion is used as an indicator, and this is related to performance agreements between the government and the institution. Performance agreements are further described in section 1.4.6 on “targets and measurements”.

Ireland, Flanders and England have other measures to encourage institutions to improve their retention and completion, that all are linked to receiving additional funding. In England institutions receive a retention premium in the recognition of the additional costs associated with retaining students from low participation neighbourhoods. The Office for Fair Access reviews institutional plans to widen participation among these groups and institutions’ report annually against the milestones they have set to improve retention, attainment, completion and progression into graduate employment or postgraduate study for students from these targeted groups.

Additional funding to stimulate study success

In Ireland there has been additional competitive funding for retention interventions since 2000. Initially, the Higher Education Authority set up the initiative, but since 2001 an Inter-Universities Retention Network has been established to exchange ideas on retention issues. From 2005, funding for retention initiatives was ring-fenced within the core grant to institutions. Similarly, Flanders has introduced an Encouragement Fund (*Aanmoedigingsfonds*), intended to stimulate institutions to support the achievement and progression of students from under-represented socio-economic and ethnic groups, disabled students, and working students. In Germany the ‘*Qualitätspakt Lehre*’ is a joint initiative between the federal government and the 16 states. It is a competitive funding programme, where higher education institutions can apply for funds to improve the quality of their teaching and learning (further details can be found in the section on learning and teaching policies). In England, the Higher Education Funding Council for England (HEFCE) and a charitable foundation funded several projects to develop the evidence base for improving retention and success, involving 22 HEIs in seven different projects. The outcomes were synthesised and have provided useful evidence to inform national policy and institutional practice in England and beyond (Thomas, 2012).

Funding is a powerful tool, and careful consideration should be given to how it is used to incentivize HEIs to improve study success. This overview reveals that there are a number of indicators of study success used in European countries. However, there does not seem to be a common practice regarding the proportion of funding that should be related to study success, or if particular groups of students should be monitored through the use of indicators in the funding system. Another relevant question is if institutions should be rewarded just for their success in this area, or should they be provided with funding to help develop appropriate approaches to improving study success. The following overview summarizes and categories the different kind of instruments that have been implemented to relate study success and drop out to institutional funding.

Table 3: Typology of instruments relating study success to institutional funding

	Instrument	Goal	Target Group	Content	Expected Effect
Performance-based Funding	Rewarding study progress	Completion	Higher Education Institutions	The number of re-enrolments or achieved ECTS is integrated in the funding formula for institutions	Policy creates an incentive for higher education institutions to take action to implement instruments/measures to improve completion rates Choice of instruments is left to the institutions
	Rewarding timely completion	Timely completion	Higher Education Institutions	The percentage of students completing their degree in a set number of years or faster is integrated in the funding formula for higher education institutions, and sometimes agreements also were made in performance contracts between HEI and ministry	Policy creates an incentive for higher education institutions to take action to implement instruments/measures to improve completion rates and shorten the time-to-degree Choice of instruments is left to the institutions
	Rewarding a decrease in drop-out rates	Completion	Higher Education Institutions	The number of drop outs are considered positively in the funding formula for HEI, where there is a reduction in the number of dropouts , also performance agreements about the decrease can be made	Policy creates an incentive for higher education institutions to take action to implement instruments/measures to improve completion rates. Choice of instruments is left to the institutions.
	Penalising drop outs	Completion	Higher Education Institutions	The number of drop outs is considered negatively in the funding formula. Here also agreements on targets in reducing the number of drop outs can be made in performance contracts.	Policy creates an incentive for higher education institutions to take action to implement instruments/measures to improve completion rates. Choice of instruments is left to the institutions.
Input funding	Funding for teaching related to number of enrolled students	Completion	Higher Education Institutions	Institutions are funded for the number of students enrolled	Policy could incentivize higher education institutions to increase the number of students
Competitive funds for innovations in teaching and learning	Rewarding innovations in teaching and learning	Completion	Higher Education Institutions	Higher education institutions can apply for additional funding to implement innovations in teaching and learning or for improving study conditions	Policy stimulates the development of innovations in teaching and learning to improve learning and teaching at higher education institutions.
Additional funds for special groups among students	Providing additional funds to support the study success of non-traditional students/students with special needs in higher education	Completion	Higher Education Institutions	Higher education institutions receive additional funding to improve study conditions for non-traditional students or students with special needs	Policy stimulates the development of instruments/measures to create better support for non-traditional students or students with special needs

4.3 Student financing

Financial support for students is another area where national policies can have a strong impact on study success. Longden (2012) summarises policy changes related to drop-out and completion in the UK over the last thirty years, and concludes that in this period students have been blamed for dropping-out.

Across Europe there are different models of student financing, covering both help with the payment of tuition fees and supporting students with their living costs. Indeed, the NESET report notes that there is a remarkable diversity of fee and financial support systems ranging from countries where students pay no fees and most receive financial support, to those where all pay fees and few receive financial support (Quinn, 2013: 81). There is however a general move towards cost sharing between the state, students and other stakeholders (Vossensteyn *et al.*, 2013), whereby students and their families are meeting an increasing proportion of HE costs and government and taxpayers a smaller proportion

From the country scans we can identify a number of ways in which countries are using student funding mechanisms to try to improve student completion and success. These include:

- Setting a time limit after which students are no longer eligible for public funding.
- Making eligibility for student financial support contingent on 'study progress', and/or penalising students who fail to make progress.
- Turning loans into grants as a reward for successful completion (however defined).
- Charging differential tuition fees to reward success.
- Providing financial support for specific groups of students who have lower rates of participation and/or completion and success in higher education.

Setting time limits

All of the Nordic countries – Denmark, Finland, Norway and Sweden – have time limits on public funding of students. After a student has reached this limit, they are no longer eligible for public funding of their studies. In Norway students can only receive study loans/grants for a maximum of eight years and in Sweden for a maximum of six years. Finland is about to reduce the period for which students are eligible for support by five months, but at the same time the amounts of grants and loans will be increased by 11%. In Denmark a similar approach has been adopted: every student enrolled in a higher education course is entitled to a number of monthly grants corresponding to the prescribed duration of the chosen study, plus 12 months. Dutch students are eligible for grants only for the nominal duration of studies. After that they can receive financial support only in the form of loans for another three years. If they do not get a degree, they have to repay all their grants and loans. All these policies intend to encourage completion within a faster period of time, and to avoid funding 'eternal students'. In England, undergraduate students can be eligible for grants and loans only for the nominal duration of their courses.

In addition, a number of European countries have policies that charge fees for studying for a degree a second time. In England, full and part-time undergraduate students can only receive financial support (loans and grants) if the qualification aim

of the course they sign up to is lower or equal to a qualification they already hold. In France and Spain fees for some courses are increased if students enrol for a second or third time in higher education. Similarly, in the Czech Republic, Poland, Latvia and Slovakia courses that are normally free are charged for if the student enrolls a second or third time (Eurydice, 2011). In many of these countries, these policies aim to prevent students enrolling in higher education to access social benefits related to the student status. Additionally, such eligibility conditions may encourage students to think more carefully about their study choice before enrolling in higher education for the first time, to avoid higher costs associated with taking a second undergraduate course.

Linking financial support to study progress

A second, sometimes simultaneous, approach to student funding is to link funding to 'progress' (i.e. number of credits attained) and to penalise those who fail to make adequate progress. The number of credits that must be attained each year varies between countries, but a version of this approach exists in Austria, Bulgaria, Denmark, Norway, Poland, Serbia, Spain and Sweden. Again, the goal of this policy is to stimulate students to continuously study and to complete in time.

Turning loans into grants

The Netherlands, Norway and Finland have sought to reward study success by offering student funding as loans which may be converted to grants to reward study completion. In Norway, students receive their financial support as a loan initially, but if they do not earn above a given amount and complete their studies, 40 per cent of the loan is converted into a grant. This change in support was introduced in 2002 with the aim of reducing study delays and increasing completion. However, analyses of the early effects of the reform, just two years after it was implemented, do not indicate that the new support scheme has had the intended effect, as there was no significant reduction in study delay (Aamodt, Hovdhaugen and Opheim, 2009). A similar approach has been adopted in Finland. Students that complete their degree on time get part of their student loan paid off by the student support authorities (KELA). The Dutch practice has already been explained above. These policies focus on stimulating the timely completion of a degree by students, although an adverse consequence may be that financial support is provided to those who are least likely to need it (e.g. those who are delayed or who have lower grades because of the need to undertake paid employment).

Differential tuition fees

A number of countries including Estonia, Hungary, Poland, some German *Länder* (e.g. Saxonia and Thuringia) and the Slovak Republic use differential tuition fees to encourage and reward study success: if students prolong their studies they have to pay tuition fees, but there are no tuition fees if they complete their studies on time. A similar policy has been adopted in Hungary. Since 2011, there has been a state scholarship system (full and partly financed student places) with a contract to repay the scholarship if the student does not graduate or chooses not to work in Hungary for

a certain period of time after graduation. Similar to the policies described above, this policy also aims to encourage the timely completion of a study programme.

There are also examples of countries that provide targeted financial support for specific groups of students, often to meet the additional costs of studying faced by these groups. For example, Bulgaria provides financial support to disabled students and mature students. Finland, Poland and Sweden also have measures in place to support study success among mature students or students with children. Poland, England and Macedonia also have financial support targeted at low-income students.

All of these approaches – using student financing to improve student completion and study success – place more responsibility for study success on students and not on institutions that in essence are not penalised if their students do not study successfully or drop-out. In the Netherlands, a penalty on study delay was introduced in 2013, which meant that students who were delayed for more than 2 years would have to pay an additional €3000 and the institutions would lose a similar amount for such students. Under these provisions both students and their institutions were penalised. However, after considerable student protests and administrative problems, the measure was abandoned. Nevertheless, it had a substantial impact on students who were about to go beyond the maximum delay.

While student financing may be one national tool to improve completion and success it probably should not be used in isolation, but in combination with other tools, including providing incentives to institutions to address the challenge. Research in Macedonia goes further and encourages better links between the labour market and HE by providing internships for students to improve employability (Mickovska-Raleva *et al.*, 2010).

The table below summarizes the main kinds of policies related to study success in student financing.

Table 4: Typology of student financing instruments relating to study success

Student financing	Instrument	Goal	Target Group	Content	Expected Effect
Setting limits for public funding of students	Limiting the number of years students can receive financial support	Completion; timely completion	Students	Students receive financial support for a limited number of years only	Policy stimulates the motivation of students to complete their study programme in a set number of years
	Limiting the number of study programmes students can receive financial support for	Completion, reduction of switching or transfer	Students	Students are only eligible to receive funding for a limited number of study programmes, e.g. no financial support available after switching study programmes or enrolling for a second degree	Policy stimulates more reflective and informed study choices of students, also prevents students from switching.
Relating funding to study progress/study success	Rewarding/penalising study progress	Completion; timely completion	Students	Financial support is dependent on the progress of the student, e.g. financial support will continue if students achieve a set number of ECTS, financial support will be discontinued if students do not achieve this number of credit points.	Policy stimulates students' effort to meet requirements of the study programmes
	Turning loans into grants	Completion; Timely completion; (Completion with a good grade)	Students	Financial support provided in the form of a loan at the start of studies but can be turned into a grant if the student meets a number of success criteria when completing the study programme, e.g. completing in nominal time or earlier, achieving an outstanding grade	Policy stimulates students' effort for outstanding performance: complete in time and achieve good grades, avoids switching and unreflective study choices
	Charging differential fees to reward study success	Completion; Timely completion; (Completion with a good grade)	Students	Students who achieve a set of targets when completing their study programme (e.g. completing in nominal time, with outstanding degree etc.) have to pay less/no tuition fees.	Policy stimulates students' effort for outstanding performance: complete in time and achieve good grades, avoids switching and unreflective study choices
Other	Providing financial support for non-traditional students in higher education	Completion	Students	Financial support is dependent on individual characteristics of the student, mostly on the socio-economic background of the student	Policy stimulates students from non-traditional groups to participate in higher education, tries to avoid drop out because of lack of financial means for this group of students

4.4 Organisation of higher education

From the survey among the national experts it also became clear that in some countries measures were taken as regards the organization of higher education. These measures are mainly related to reforms of the degree structure, access to higher education, and the flexibility of educational pathways in higher education.

As regards degree structure, some countries have used the implementation of the Bologna Reforms as an opportunity to introduce measures to shorten study times. This has been done particularly in Italy, Norway and Finland. In Norway and Finland shorter degree programmes (e.g. bachelor degrees) have been introduced. In Italy it was expected that the change of the degree structure would lead to a broader offer of study programmes that would reflect student demand. Also shorter degree programmes should make it easier for students to complete a degree. In Finland and Norway it was found that introducing different degrees has moved the problem of high drop-out rates and long study periods to the level of the graduate programmes. The number of students enrolling in master study programmes has increased in recent years but an increasing number no longer complete their masters degree. The reform has been successful at the undergraduate level, but to some extent these positive effects are diminished by the results at the graduate level. In Finland, policies have recently been implemented that limit the maximum time to degree; students can lose their right to study if they spend more than two years extra on the completion of a degree. Similar policies have been implemented in Greece where students are not allowed to complete their study programme when they exceed the nominal study period by a certain number of semesters.

Policies that regulate access to higher education can also be defined as changes in the organization of higher education. Some countries attempt to achieve the best match between the student's interests and capabilities/competencies and the study programme, rather than allowing prospective students to decide what and where to study. In some countries students have to make an early decision about what study programme they choose after completing secondary school. In the Netherlands for example, since 2013/2014 prospective students have been asked to enrol in the study programme before 1 February of the year they would like to start their first-cycle studies, and they can be refused if they did not register before May 1st. Between February and May, each higher education institution in its own way tries to assist prospective students to find out if they really are capable and motivated enough through questionnaires, interviews, motivation letters, assessment centres, etc. Study programmes may refuse to enrol prospective students who do not take part in this matching procedure.

Selective access to higher education (discussed above 1.3.3) is another important area where measures to improve the match between the student and the study programme have been implemented. Such policies are especially significant where demand for HE outstrips the supply. While some countries have introduced measures to select students on entry to higher education, for example, by introducing a *numerus clausus* or other measures, a few other countries have implemented selection procedures after the first year of study in bachelor programmes. One example of this selection is the 'binding study advice' in the Netherlands. This advice is given to

bachelor students close to the end of their first year of study. Students that do not achieve a minimum number of credit points are dismissed from their study programme. The binding study advice has been implemented in the majority of bachelor study programmes at Dutch higher education institutions. It has a twofold aim: first to prevent students from spending too much time on a study programme for which they lack talent and motivation, second to stimulate an early switch of the student to a more suitable study programme. An early evaluation of the binding study advice (Arnold, 2014) has shown that its effect on completion rates is positive but small. Practice tells that students who switch to another study programme are also less successful there. The scale of the study programme where the binding study advice is implemented is also important – it has a more positive effect in large scale programmes that are less selective.

The recognition of study achievements when switching institutions or study programmes is still a major issue. In some countries at the level of institutions different policies have been implemented that ease the recognition of credit points that have already been achieved in study programmes where students drop-out or leave. For example, in Macedonia different policies for the recognition of formal and informal learning outcomes have been implemented.

Table 5: Different HE organisational features relating to study success

HE Organization	Instrument	Goal	Target Group	Content	Expected Effect
Degree structure	Introducing shorter degree courses	Completion; timely completion	Institutions and students	Shorter degrees provide an opportunity to participate in higher education for students who do not want to spend longer periods in higher education.	Policy mostly implemented to reduce time to degree in higher education, which also saves the government, HEIs and students money.
Diversification of degrees	Expanding the portfolio of degrees: long and short degrees, general and specialized degrees	Completion; timely completion	Institutions and students	Diversification of degrees helps to better meet the demands of students	Achieve a better match between student demands/requirements and study programmes
Access - Limiting access to higher education	Limiting access to higher education (related to students' prior academic achievements)	Completion; timely completion; completion with good grade	Institutions and students	Limiting access to higher education based on the prior achievements of the students should help to select the best students for higher education. Access to higher education can be restricted in different ways: - in general (only best performing school leavers are eligible for higher education) - by discipline/study programme (for some disciplines/study programmes access can be limited) - by institution (institutions offer only a limited number of study places and only accept/select the best students)	Policy aims to select the best students for higher education, disciplines/study programmes or institutions. Study success is stimulated in different ways: students have a higher cognitive and motivational potential to complete their study successfully, while restricted access to higher education makes drop out and switching more costly for the students because of their prior investments, also students make a study choice.
Access - Matching students and study programmes	Matching students and study programmes before and during study	Completion; timely completion	Students	As study success is to a large extent dependent on a good fit between the requirements of the study programme and the student's competencies and expectations matching aims at achieving a good match between these. Matching is achieved by different instruments: early application to study programme, student consultancy before and during studies, testing of student's competencies and abilities.	Policy stimulates more informed student study choices, start to seek information about study programmes early and investigate in their own competencies. Policies should support the student in finding the right place to study.
Flexibility of pathways in higher education	Recognition of educational achievements	Completion	Students	Policy allows that former educational achievements of students are recognized widely within the higher education system. Recognition allows an easier transfer between institutions and study programmes as prior educational achievements are recognized. Besides formal achievements, in some countries also informal education achievements are recognized.	Policy intention is that students make more deliberate choices about study programmes and institutions. Also, the policy intends to avoid a wastage of resources as prior learning experiences are valued.

4.5 Learning and teaching policies

European and international research has identified the contribution of learning and teaching to improving study success. Research in the UK (Thomas, 2012) concludes that learning and teaching is at the heart of improving student retention and success. This finding echoes research from the US and Australia (Devlin *et al.*, 2012). Thus, it is not surprising to discover that a number of European countries have explored how to use national policy and development approaches to improve the quality and effectiveness of learning and teaching. As learning and teaching takes place within the higher education institution – and in many countries there is considerable institutional autonomy – influencing learning and teaching through national policies can be challenging. In our expert survey we identified seven countries where there are national policies seeking to improve learning and teaching within higher education institutions.

The approaches used concern primarily the system of quality assurance, national enhancement strategies and improving the learning resources available to students and institutions.

The expert survey identified three countries that have sought to improve student completion and success through their national quality assurance schemes: Italy, Montenegro and Norway. It is perhaps surprising that this is not a more common approach. A German study (In der Smitten and Heublein, 2014) finds that only a minority of institutions and/or faculties have implemented a quality management system to improve study success, although they have implemented other measures as well.

In Italy drop-out and study success are not addressed by specific national policies but via regulations on quality, particularly in the accreditation of degree programmes. Reducing drop-out and promoting study success (as stated by the recent Gelmini Law on university reform) should be achieved by quality assurance instruments. The Italian national agency (ANVAR) has introduced some indicators in the accreditation of degree courses to check drop-out and study success. In addition, universities have also implemented regulations to improve study success which are in line with the AVA-System (Autovalutazione, Valutazione periodica, Accreditamento: Self-assessment, Periodic Assessment and Accreditation) of ANVAR.

Learning and teaching enhancement strategies also deal with improving the quality of teaching and learning. These approaches can be found in the UK (particularly England, Wales and Northern Ireland) and Germany. The UK government (through Universities UK, the three funding councils and the Department of Education and Learning in Northern Ireland) established the Higher Education Academy (HEA) in 2004 (amalgamating two existing organisations). The remit of the HEA is to enhance the student learning experience through learning and teaching. The emphasis has been on the development of academic and support staff, including the development of a Professional Standards Framework supported by training for all new staff at most HEIs certified at postgraduate level. The HEA also provides continuing professional development for more experienced staff. The National Teaching Fellowship Scheme (NTFS) is a further instrument to improve teaching quality. NTFS is an annual

competition for outstanding teaching staff, who receive the accolade, plus prize money to enhance their excellence in teaching and the opportunity to bid for further funding (restricted to NTFS). As a consequence of funding cuts, the future of the HEA is currently uncertain however.

In Ireland, following the national evaluation of Ireland's access programmes by the Higher Education Authority in 2006, Learning and Teaching Centres were established, together with a Charter for Inclusive Teaching and Learning. Teaching and Learning Centres offer courses for academic staff in respect to inclusivity in learning and teaching and give staff the tools to develop more diverse and continuous assessment methods, to develop student support systems and to design student evaluations of teaching systems.

In France in 2007 the "*plan pour la réussite en licence*" (plan for succeeding in obtaining a bachelor degree) was implemented. The plan concerned the period 2008-2012 and provided additional money to universities applying for it. The plan included the following elements: better support for choosing a diploma (early choices, signing a contract and more flexibility in changing study programmes); more personalized support for students; assignment to a specific teacher/mentor, and tutoring. Also the first year of the curriculum of Bachelor programmes was changed towards a more multidisciplinary orientation and teaching fundamentals.

In Germany the '*Qualitätspakt Lehre*' is a competitive funding programme which aims to improve the quality of teaching and learning by improving human resources in teaching; supervising and (student) counselling; supporting higher education institutions to improve the teaching qualifications of their staff teaching; supervising and (student) counselling; and assuring and further developing the quality of teaching and learning at higher education institutions. The programme funds eligible proposals from higher education institutions that aim to improve staffing; the further qualification of staff; measures to improve the conditions of teaching and learning; and the development of new and innovative forms of teaching and learning.

The Republic of Macedonia has supported two national level programmes to improve the quality of learning resources available to students and universities. The first programme involves the translation of 1,000 professional books and manuals used at distinguished universities in the USA, UK, France and Germany. The idea is to create conditions for using the best professional and scientific literature from distinguished universities in the world and ensuring knowledge that is equal to that in highly developed systems. In the second programme the government is procuring equipment for 80 laboratories to improve the scientific and teaching work of the public universities in different scientific areas. In the UK, the Higher Education Academy has worked with academic staff and other sector wide bodies to produce learning resources and to undertake or support pedagogical research.

The countries identified above – Germany, Ireland, Italy, Montenegro, Norway and the UK have all recognized the importance of learning and teaching to study success and have developed a national policy response. Research from other countries in Europe recognizes the importance of learning and teaching, but this has not been translated into a policy response, but rather guidance or encouragement for institutions.

Research from a variety of countries also suggests the importance of changing learning and teaching practices to improve study success. In Macedonia research recommends updating the curriculum, paying more attention to learning outcomes, competencies and transferable skills, and developing teaching and research staff (Mickovska-Raleva *et al.*, 2010), (see also Pop Ivanov, 2011 and Evaluation Commission, 2011). Finnish research emphasises the value of guidance and support services for students (Annala, Korhonen and Penttinen, 2012). Research in Denmark (Haastrup *et al.*, 2013) about how to bridge the gap between theory and practice in professional bachelor's degree programmes such as nursing and teaching, found that better connection and coherence between theoretical and practical elements in education programmes through communication between teachers, students and practice/internship supervisors will help minimize drop-out.

Research in Estonia found that common reasons for leaving higher education were working during studies, responsibilities related to family and personal life, and financial problems (Beerkens, Mägi, & Lill 2011). Leavers stated that the development of distance education options would have prevented them from leaving. The project therefore suggests that the development of distance learning opportunities would reduce the number of drop-outs. However, research in England suggests high drop-out rates for part-time and distance learner students – rates far higher than for full-time face to face study (HEFCE, 2009).

Table 6: Typology of teaching and learning policies relating to study success

Learning and teaching policies	Instrument	Goal	Target Group	Content	Expected Effect
Integration of study success in quality assurance system	Integrating study success as a target in the institutional quality assurance system	Completion	Institutions	Some quality assurance systems integrate study success and drop out as indicators for the quality of teaching and learning, e.g. the (Re-)Accreditation of study programmes is dependent on the study success at the institutional level/level of the study programme.	Policy aims to stimulate institutional efforts to implement instruments and measures to improve learning and teaching.
National enhancement strategies	Putting the improvement of teaching and learning high on the policy agenda, providing training for the professionalization of teaching and learning in higher education	Completion	Institutions (Teachers)	The national strategies aim at increasing the knowledge base about good teaching and learning in higher education and also spreading knowledge by professionalising teachers/practioners in higher education/staff development.	Policy aims to improve the teaching quality in higher education and to support the implementation of innovative forms of learning and assessment to better meet students' learning needs.
	Providing additional resources for student support	Completion	Institutions	Here national strategies aim at improving student support at higher education institutions, in particular the consultancy of students as regards their study choices. Also the improvement of student-teacher relationship is intended by providing additional resources for assigning a referent teacher or tutoring of students.	The policy aims to improve the institutional commitment of students, i.e. to integrate students better and to provide more support for students having problems integrating into the academic community.

4.6 Targets and measurements

Through the quick survey among national experts, several examples of targets, measurements, and performance indicators used by governments to try to improve completion rates and reduce drop-out emerged. Targets and measurements might be evident in a number of different ways. Several countries, for example Ireland, the UK, Norway and the Czech Republic publish different types of indicators on study success by institution on a yearly basis. In some of the countries, these indicators are published separately, as Ireland did in the HEA report “A study of Progression in Irish Higher Education” (Mooney *et al.*, 2010). In other countries, publication of completion rates and drop-out rates might be part of a general set of higher education performance indicators that cover a wider range of issues important to higher education institutions, exemplified by the yearly status report on higher education published by the Norwegian Ministry of Education and Science (*Tilstandsrapport for høyere utdanning*). The argument for creating targets at the institutional level is that it can contribute to increasing awareness of the issue of study success, for both government, institutions and society more widely.

At the same time, in many countries study success is not monitored, usually because of a lack of data. Poland is an example of a country that has no national data on drop-out, as this is not monitored in national statistics. Slovenia is another country where better data are needed. If better data were available, then institutions could be expected to do more about non-completion. In order to achieve this, Slovenia aims to establish a system that can effectively monitor the student body and identify obstacles to study success in its national Higher Education programme (Slovenian National Higher Education Programme 2011-2020). Hence, some countries that do not have sufficient data on study success are working to improve their data to enable them to monitor student progression, completion and drop-out.

There are also examples of countries that have taken this a step further. Estonia and the Netherlands are examples of countries that have implemented performance agreements between the government and individual higher education institutions, and in both cases this is also linked to funding. In the Netherlands, all higher education institutions were included in performance agreements with the Ministry of Education, Culture and Science in autumn 2012. In 2011 there was a collective agreement made between the ministry and associations of universities and universities of applied sciences. That set the stage for creating performance agreements for individual institutions. Performance agreements contain individual targets for each Dutch institution, based on their unique situations, missions and goals and scores on the indicators. In Estonia, all public universities have individual contracts that run for three years, in addition to performance agreements that are signed annually by the university Rector and the Ministry of Education and Research. The aim of the performance agreement and the contract is to allocate funding. Institutions are obliged to report on progress in terms of the goals set in the contract.

Another type of target or measurement identified in the expert surveys is limiting the time students can spend on completion of a degree. In some countries, this is a matter for higher education institutions, but countries such as Finland and Denmark

have implemented this at the national level. Finland implemented new legislation in 2009 that limits the time a student can spend on finishing a degree. Bachelor students can extend the study time to one year beyond the normative time to degree, while students taking a longer university degree (different types of master's) can spend up to two years more than the normative study duration to finish their degree. This radically limits the time students can spend on their degree, and the aim of the legislation is to speed up study progression. In Denmark a similar amendment to the higher education act states that students at the master level have to complete their thesis within half a year. If they do not hand in the thesis on time, they fail the exam although they do have the opportunity to try again twice. Limiting the time students can spend in higher education might be effective in speeding up study progress, but at the same time, there is a risk that these types of measures might contribute to creating drop-out, as students are pushed out of the higher education system due to non-satisfactory progression.

5 Lessons learned

This literature review has shown that study success and drop out are studied in Europe and are high on the policy agenda in a number of the countries studied. Both study success and drop out have many dimensions and there are numerous ways in which these terms are defined and understood. The review also indicates that study success and drop-out is determined by a multitude of factors at the individual, institutional and national level. The country quick scan revealed that a wide variety of policies have been introduced to improve study success and reduce drop out. These target the individual student as well as higher education institutions, their characteristics and procedures to improve study conditions, teaching and learning experiences, and learning resources. In summary, the main findings on factors contributing to study success and reducing drop-out at the different levels of investigation are as follows:

- At the *individual level* it is clear that the socio-economic and demographic background of students and their academic capabilities play a crucial role in study success. In addition, these students' background characteristics, e.g. socio-economic background and ethnic origin, are strongly related to each other. Research on the cognitive competencies and motivational dispositions of students has shown that study success is highest when there is congruence between the students' expectations and their self-estimation of their own capabilities, and the reality of the study programme and its requirements.
- At the *institutional level*, the creation of a culture of commitment among students as well as teachers and management is crucial for study success. Commitment can be achieved through different instruments: teaching and learning policies and support services to the student are important here. The institutional context also counts: the composition of the student body, the size and selectivity of the institution as well as its resource allocation policies all impact on study success.
- At the *level of the higher education system* different aspects concerning the set-up of the system are important. Study success can be influenced by the variety of institutions offering higher education and the variety of degrees offered. The management of access to higher education and steering prospective students towards the best matched study programme are important determinants of study success too. In this context the variety of institutions offering higher education and the variety of degrees that can be completed determine the options prospective students have and the odds that a good match is made. Furthermore, study success is heavily related to the rules and regulations regarding the funding of higher education institutions. In those countries where institutional funding is related to study success and completion it is clear that this creates a strong incentive to implement policies aimed at improving study success and completion.

Across Europe a wide variety of instruments have been implemented at the institutional as well as the national level but few have been systematically evaluated.

Some instruments do not explicitly target study success and completion but focus for example on the quality of higher education, or improving and enhancing the resources for higher education, or providing incentives to implement innovations in teaching and learning, or improving the competencies and capabilities of higher education teaching staff. In terms of policies dealing with study success and completion the following outcomes can be highlighted:

- Funding is a strong instrument in promoting study success and reducing drop-out. It plays a particularly strong role in those countries where study success is high on the political agenda. Here indicators related to study success have a major role in the funding formula for higher education institutions, particularly when performance based funding is applied.
- Another important policy instrument is matching and information procedures for students. A good knowledge about the realities and requirements of study programmes and a fit between the students' capabilities and the requirements of the programme contribute positively to completing the study programme. Different policies to improve the student-programme match have been developed. Among these are extended and early information campaigns for school leavers, tests to discern students' capabilities as well as (compulsory) admissions interviews or the counselling of the students prior to enrolment.
- As regards actors or stakeholders that are engaged in the improvement of study success, higher education institution themselves are among the main drivers. They are active in different areas but most of the measures taken have the creation of institutional commitment as a common denominator. Policies at the institutional level include teaching and learning policies, professionalization of teaching staff, improvement of support services, and better facilities for the social integration of students. The tracking and monitoring of the study progress of individual students is an important instrument at the institutional level and helps identify students that are at risk of dropping out.

Finally, our review of the ways outcomes, i.e. study success and drop-out, are measured has revealed that across Europe a wide variety of different measurements exist. This has consequences for the comparability of drop-out and completion rates among European countries, but also for the individual country itself. Depending on the measurement chosen, different drop-out and completion rates will result.

6 References

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