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Chapter · May 2020

DOI: 10.1007/978-3-030-56316-5_13

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What Works for Underrepresented Groups? Identifying Effective Measures for Enhancing Access to Higher Education in Europe



Simona Torotcoi, Delia Gologan, and Anastasia Kurysheva

1 Equity Considerations Within the Bologna Process

Despite the general increasing access to tertiary education, HE systems remain highly stratified (Marginson 2016), gender imbalances still exist between different fields of study, and students with an immigrant background or with parents without a HE degree have lower chances to achieve tertiary attainment, etc. (European Commission/EACEA/Eurydice 2018). On the one hand, there is a social demand for access to a variety of degrees (i.e., high-status professional degrees, or within elite universities), on the other, there is a normative inquiry for access to quality education for a diversity of students. Widening access and participation can be regarded as a strategy for change since the social benefits of inclusion in HE can have long term effects both for the individual and the society he/she lives in. Among these there are: tolerance and expanded social networks, contribution to the economy, cohesiveness in society, political participation, health and wellbeing, lower crime propensity, higher earning potential, better parenting and others (Murray 2009).

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A. Curaj et al. (eds.), *European Higher Education Area: Challenges for a New Decade*,
https://doi.org/10.1007/978-3-030-56316-5_13

1.1 Access to Higher Education as Part of General Equity Discourses

In HE policy the concept of equity—originated in welfare economics—started to be used at different moments in time, in different places around the world, usually along with the shift from elitist universities towards mass HE systems. There is no one single definition of equity in HE policy, but several that are more prominent both in the literature and among practitioners, thus showing the flexibility of the concept and the divergent understandings of it by both researchers and policy-makers. It is understood as equality, providing equal opportunities for access to and success in HE in order to even out the circumstances that are beyond one's control (i.e., financial resources of the family or educational attainment of the parents) (Salmi and Bassett 2014). The concept is linked to evening out (previous or existing) inequalities through the special allocation of resources that could be translated into HE policies, and policy instruments (Geven 2012).

Equity is sometimes considered to be synonymous with access to HE thus with “widening participation and improving the chances of success of under-privileged youths” (Salmi and Bassett 2014) through utilizing tools for ensuring diversity (i.e., affirmative action).

In its narrow sense, access to HE can be defined as entry/admission to HE (Prodan et al. 2015) while more generally, it can be defined as the ability of people from all backgrounds to access HE on a reasonably equal basis (Usher and Medow 2010; Wang 2011). This definition is comprehensive in scope and implies that students of all backgrounds must not only be “reasonably” able to take advantage of educational opportunities, but also must be adequately prepared and equipped to do so in order for the system to be considered “accessible”. In both cases, it is merely the starting point whereas the final goal of access policies is successful participation (Tonks and Farr 2003).

Considering this, interventions aimed at HE equity address one or a combination of access, retention and persistence and successful transition to further studies or professional career. Holistic approaches tackle all potential sources of inequity such as socio-economic, ethnic, gender- and disability-based, both at individual and system-level through policy instruments that equalize economic, cultural and social capital within the education system (Geven 2012). These approaches can propose solutions for the difficulties encountered by students enrolled in lower levels of education (primary or secondary), at the transition between secondary and HE, or while attempting to enrol, participate in and successfully graduate from HE programs. These types of holistic approaches to inequities are needed as barriers tend to overlap in the cases of potential students coming from difficult socio-economic backgrounds that are traditionally underrepresented in the educational system or are excluded from it. However, there is no one-size-fits-all type of solution (no mix of policies will work everywhere), and initiatives in the field should address the goal of eliminating both individual and system barriers (e.g. admission selection should be freed of any privilege bias) (Usher 2015).

1.2 The Social Dimension of the Bologna Process

The Bologna Process (and the subsequent European Higher Education Area—EHEA) represents the most significant and ambitious HE agenda in Europe with an equity dimension. The Sorbonne Declaration referred to the fact that “students should be able to enter the academic world at any time in their professional life and from diverse backgrounds” (1998, 2), and this was the beginning of the sequence of moments linked to the Bologna Process when countries reiterated their support for integrating a diverse student body within their programs and structures. Therefore, in 2001, through the Prague Communiqué, member states were encouraged to create lifelong learning policies, to facilitate the partnership of HEIs and students in promoting the attractiveness of the EHEA, as well as the policies aiming at the social dimension of HE, including the access of underrepresented groups. The 2003 Berlin Communiqué acknowledged that “the need to increase competitiveness must be balanced with the objective of improving the social characteristics of the EHEA, aiming at strengthening social cohesion and reducing social and gender inequalities both at national and at European level”. This trend continued in the ministerial conferences after 2003, as it became clear that the social dimension includes measures taken by governments “to help students, especially from socially disadvantaged groups, in financial and economic aspects and to provide them with guidance and counselling services with a view to widening access” (Bergen Communiqué 2005). As of 2007, participating countries were asked to report on the actions taken at the national-level and on the effectiveness of national action plans and measures targeting the social dimension of HE (i.e. access participation and completion measures for underrepresented students). More specifically, some of the means refer to adequate student support and services, counselling and guidance, flexible learning paths and alternative access routes, including recognition of prior learning (Bucharest Communiqué 2012), but also implementing the EHEA social dimension strategy (Yerevan Communiqué 2015). However, the social dimension of the Bologna Process remains one policy action with very few concrete results.

1.3 Literature Gap and Methodology

A significant number of countries and HEIs have started investing resources and take onboard initiatives aiming at widening access for disadvantaged or underrepresented groups—that we will refer to from now on as “equity groups”—(i.e., through quota systems, preparatory programs, etc.). However, little is known about whether such initiatives actually shape opportunities for potential students. Knowing which of these initiatives work and whether they are achieving the intended goals is of utmost importance for policy-makers. Given the fact that national-level programs might provide different responses/reactions from HEIs, which have a certain level of

autonomy, this paper addresses the relative effectiveness of access initiatives at the HEIs level.

While in the US there is a considerable amount of research about the effectiveness of access policies (Pharris-Ciurej et al. 2012; Perna et al. 2008; Myers et al. 2010), in Europe we found very few such studies focusing on the university level, fact which motivated us to take up the challenge of mapping them out. The existing literature focusing on Europe are systematic reviews of evidence on the effectiveness of interventions for widening access, participation and completion rates of equity groups in HE. For example, Torgerson et al. (2014) and Younger et al. (2019) provide a synthesis of the international evidence, mainly from the US and the UK. Similarly, Herbaut and Geven (2019) selected 71 studies, most of them across the US and few from Europe, and compared more than 200 causal effects of outreach and financial aid interventions on access and completion.

As Perna et al. (2008) claim, efforts to understand why policies and programs are not working are hampered by the absence of a framework for organizing the myriad efforts designed to reduce participation gaps and, by extension, for demonstrating policy blind spots and redundancies. The overarching aim of this paper is to contribute in addressing the current literature gap by focusing specifically on access measures and interventions for widening access for equity groups, that can be primarily addressed on HEIs level.¹ For this purpose, the paper will collect, document, scrutinize and critically analyze the current research literature (i.e., through the work of others, evaluation reports/studies, etc.) which assesses the effectiveness of these types of policies, aiming, at the same time, to identify gaps and make recommendations for both potential further research and for policy-makers. The main research question this paper explores is: **what is the relative effectiveness of different access measures implemented at the university level, and which characteristics moderate their effectiveness?**

Before proceeding to the actual research, it is worth mentioning what is referred to here as *access*, who are the *equity groups* and how *effectiveness* and *impact* can be measured. For the purpose of this paper, *access* is defined here in a narrow sense as entry/admission to and enrolment of students in HE education programs (Prodan et al. 2015). As far as the *underrepresented groups* are concerned, authors chose to refer to a broad category of students, including those with diverse, ethnic, cultural and migration background, sexual identity and orientation, socio-economic background, educational background (alternative pathways, lifelong learners, first-generation students), caring responsibilities, religious background/beliefs, age or students from rural areas (c.f. Claeys-Kulik et al. 2019). When it comes to the *effectiveness* of various approaches to increase access to HE, the authors opted to consider the extent to which (i.e.) a program has reached the goal(s) that has been set initially, or whether it achieves the set expectations or the goal(s) that were intended or desired by stakeholders. Similarly, Cowan (1985) refers to effectiveness as the ratio of the actual

¹It is part of a larger effort and preoccupation of the authors to address all types of measures and interventions targeting reducing inequities, but this paper only presents the results connected to different types of access measures.

outcome to the possible or the ideal outcome. The three most often used indicators for measuring the impact of HEIs activities on diversity, equity and inclusion refer to the number/share of students enrolled from less represented/disadvantaged backgrounds, the success stories of the people targeted through the measures, and the graduation rate of students from underrepresented/disadvantaged backgrounds (Claeys-Kulik et al. 2019). For the purpose of this paper, we will be looking at the first set of indicators but keeping in mind the initial goals and intentions of the measure under consideration.

In order to reach the expected results, we first undergo a mapping exercise looking for studies referring to the access policies relevant to our research initiative. The approach for this entailed extensive searches of comprehensive education databases such as Web of Science and the Educational Resources Information Center (ERIC)—the world’s largest educational database and the most frequently used index for carrying out educational research. The search for the studies of interest was also conducted through the Google Scholar search engine using combinations of search words referring both to the interventions of interest (e.g. bridging programme) and to underrepresented groups of students (e.g. first-generation students). The search was complemented by consulting the bibliography/reference list of related studies, by consulting the (non-academic) publications of key organizations and structures in the HE sector in Europe, and by our knowledge on studies on the topic including non-academic studies from different organizations, structures and HEIs. In line with similar studies (Younger et al. 2019), publications’ titles and abstracts in these databases were searched for a combination of keywords related to “underrepresented groups” in/or/and “higher education”, “tertiary education” or “universities”. In total, a number of 17 studies written in English have been included in the sample used for this paper, out of which two of them are non-academic. The selection was first and foremost determined by the availability of studies analyzing institutional-level equity policies.

Section 2 of this paper looks at the different social dimension targets set by the EHEA participating countries and evaluates policy instruments (financial and non-financial) promoting equity.

2 Access Policies Between National Frameworks and Institutional Practices

In Europe, the social dimension is an increasingly important policy issue with both state and HEIs intervening to increase access and participation. The 2018 Bologna Implementation Report states that several countries have set long-term goals and targets with regards to the access of different social groups. For example, by 2025, Austria aims to have at least 10% of men/women in each study program and increase the proportion of second-generation immigrants among entrants to 30%. By 2030, Scotland aims to increase the access for students coming from the most deprived

backgrounds so that it represents 20% of the entrants. By 2020, the Czech Republic set out to increase the access of students with specific educational needs in HE so that their share will be close to share among high school graduates. Setting such targets is a crucial step, however, considering the fact that the admission systems provide the transition to HE, they are the key point for determining which students go into which type of HEI (Haj et al. 2018). The type of admission systems in a country can positively contribute or hamper equity and access. Orr et al. (2017) and Haj et al. (2018) reflected on the types of admission systems and their impact on the equity of access, progression and completion in HE in Europe. By using 36 European countries, Orr et al. (2017) created a two-dimensional typology of admission systems based on the extent to which school streaming leads to some forms of HE, and whether HEIs have the autonomy to use their own selection criteria.

The result of Orr et al. (2017) typology is a four type admission system as follows: a selection by schools system (Type 1) in which secondary schooling does not lead to HE entry, and HEIs cannot select with additional criteria; a selection by HEIs (Type 2) in which HEIs can select with additional criteria, and all previous schooling pathways may lead to HE entry; a least selection system in which neither the school system limits students nor the HEIs select them (Type 3); and the last type, a double selection in which both the school system and HEIs select students (Type 4). An assessment of the performance of each type (Orr et al. 2017) shows that HE entry rates are higher where HEIs have increased autonomy. Moreover, countries that put up the fewest academic barriers to access to HE are also the ones with the most equitable outcomes by social background (measured using HE attainment of graduates' parents), whereas countries in which HEIs can use their own admission criteria are more likely to admit a higher proportion of mature students. In countries with streams not leading to HE, and HEIs have the autonomy in organizing assessment, females have a higher increase in participation between upper-secondary and HE.

When it comes about these types' performance with regards to equity Haj et al. (2018) argue that the systems with the selection system Type 1 have the lowest relative participation rates of students from low socio-economic backgrounds. This is due, on the one hand, to the school streaming where pupils are placed in schools with different likelihoods of leading to HE, on the other hand, by HEIs using students' secondary school examination scores for admission. In Type 2 systems equity is not restricted as in Type 1. However, when applying additional criteria, HEIs might focus on the academic achievement of the student, limiting the chances for students with lower socio-economic backgrounds, contributing therefore to perpetuating inequality. Provided the level of autonomy HEIs have, they can promote their own discretion positive actions for certain groups of students, or alternatively can control the student distribution per field of study (Haj et al. 2018). Type 3 systems present the best outcome in terms of equity since it has the fewest barriers to access, but compared to systems in which HEIs can select students, these Type 3 systems might have higher drop-out rates since HEIs might not be able to get students that fit with a study program (Haj et al. 2018). Last but not least, Type 4 systems are expected to be the least equitable considering both the school streaming and HEIs selection criteria, with numerous potential students that are not being considered for HE (Haj et al. 2018).

3 Access Measures and Their Effects: What Works for Underrepresented Groups?

Access measures can be categorized in several ways: whether they are financial or non-financial, the problem they tackle, the phase they intervene in (i.e., during secondary education, during the transition to HE or after the enrolment in the HE system).

As far as financial instruments are concerned, they might primarily target students with low socio-economic backgrounds, but might target other equity groups as well. However, it is widely known that the principal dimensions of inequality overlap in many ways, for example, ethnic minorities are more likely to live in rural areas or peripheral neighbourhoods and, therefore, are more likely to be affected by poverty. Salmi (2018) argues that, nowadays, financial aid policies are the most commonly used, often in combination with non-monetary aid policies. Among these is worth mentioning the tuition-free or partially subsidized HE, the needs-based grants, scholarships and bursaries, student loans, and a variety of funding formulas.

As far as the non-financial policy instruments are concerned, the most widespread practices relate to different forms of positive discrimination, reformed selection procedures and/or preferential admission programs. For example, Usher (2015) identifies several categories of measures universities can incorporate within their work aimed at enhancing HE, including early interventions strategies designed to eliminate barriers in the educational pipeline prior to tertiary education. Claeys-Kulik et al. (2019) put forward 12 most frequently used access measures used by universities among which: guidance, counselling and mentoring, accessible building and activities, assurance about non-discrimination, part-time study options and flexible courses, financial support, preparatory courses, recognition of prior learning, child-care on campus, positive action, housing support, quotas for students from certain groups/backgrounds, and general positive discrimination measures.

As resulted from our bibliographic search, most of the identified studies focus on three main measures as summarized in Table 1. It provides an overview of the identified studies as follows: blue—outreach, counselling and mentoring; yellow—financial aid; green—preparatory courses and programs. It also summarizes the main aim of the study, its data and method, and the main finding with regards to effectiveness (“+”—effective, “-”—negative, or “0”—no effects).

As Table 1 above shows, with some exceptions (i.e., the studies focusing on Aimhigher) the identified studies look at different measures targeting different equity groups of students, in different countries and HEIs contexts, and, therefore, the findings do not allow for a cross-comparison of the results. Thus, we abstain from making obsolete conclusions and cause-effect inferences. Rather, the conclusions we reached represent the authors’ opinions as emerged from the analysis of the studies sample of the paper. The section below (1) provides a general description of the type of measures under consideration, (2) offers several examples of such measures by specifying the university accommodating the measure, the type of measure and its components, its target group and the intended goals of that specific measure, and

Table 1 Overview of the identified studies

Author(s) and measure	Aim of the study	Data and method	Effects
Gumaelius et al. (2016) Outreach	To describe and compare outreach initiatives aimed at increasing enrolment in engineering programs (DE, DK, SE, ES, PT)	Self-reported institutional data; comparative analysis	+
Pekkala-Kerr et al. (2015) Information	To test whether the match between educational choices and the demand for skills in the labour market can be enhanced by providing information (FIN)	Randomized field experiment with graduating high-school students	0
Ehlert et al. (2017) General information	To examine whether correct and detailed information on the costs of and returns to HE increases the likelihood of HE applications (DE)	Field experiment with less-privileged high school graduates	+
Abbiati et al. (2018) Personalized information	To assess the role of information barriers for patterns of participation in HE and the related social inequalities (IT)	Randomized experiment with high school seniors	+
Wulz et al. (2018) Counselling	To provide an overview of counselling activities targeting disadvantaged learners (AT, DE, ES, IT, LI, UK, RO, DK, SL)	Survey with national student unions	+
Doyle and Griffin (2012) Mentoring	To review Aimhigher's contribution to widening participation for students with non-traditional backgrounds (UK)	Literature review	+
McCaig and Bowers-Brown (2007) Mentoring	To determine the success of Aimhigher as a potential mechanism of social justice (UK)	Literature review	-
Fack and Grenet (2015) Fee-waiver	To provide evidence on the impact of a need-based grant on HE enrolment for low-income students (FR)	Regression discontinuity design	+
Baumgartner and Steiner (2006) Financial aid	To evaluate the effectiveness of student aid targeting students from low-income families (DE)	Difference-in-difference	+/-

(continued)

Table 1 (continued)

Author(s) and measure	Aim of the study	Data and method	Effects
Hatt et al. (2005) Bursaries	To explore how HEIs administered a national-level bursary scheme (UK)	Institutional databases and interviews with bursary students	+
Lannert and Garaz (2014) Scholarship	To investigate the degree in which the scholarship contributed to enhance access	Online survey, focus groups and interviews with beneficiaries	+
Roma Education Fund (2015) Scholarship mix	To investigate whether the scholarship contributed to the academic trajectory of its beneficiaries	Program data, and surveys with mentors and beneficiaries	+
Berg (2018) Language classes	To compare the support and integration programs at different HEIs (DE)	Interviews	+
Rostas (2017) Mixed	To understand the impact of measures supporting Roma's access to HE	Personal experience	+
Pinheiro-Torres and Davies (2008) Mixed	To evaluate the effectiveness of a program supporting higher ability students from lower socio-economic backgrounds	Program data	+
Casey et al. (2011) Mixed	To identify students' responses to the different components of the program	Program data; longitudinal study	+
Walker (2010) Pre-university summer school	To assess the impact on enrolment and retention of non-traditional students attending the summer school	Institutional data	+/-

(3) synthesizes the evidence collected on their effectiveness and impact based on existing studies.

3.1 Outreach, Counselling and Mentoring of Prospective Students

Early interventions for eliminating barriers prior to access to HE include outreach and bridging programs or services like personal and professional counselling, mentoring

Table 2 Selected examples of outreach, counseling and mentoring of prospective students

HEI	Type of measure and components	Target group	Intended goal(s)
University of Barcelona, Spain	Full tuition scholarship, housing, free language course, mentoring, legal advice, psychological support and dental care	Refugees	Widen access and ensure participation
University College Dublin, Ireland	Outreach—Student access leader programme	Students with disabilities, mature and part-time learners, and students from socio-economic disadvantage	Widen access and ensure participation
University of Lille, France	Financial and pedagogical support to students from disadvantaged backgrounds during their first year of study	Supporting students from socio-economically disadvantaged backgrounds	Ease access to graduate and postgraduate studies
University of Strathclyde, UK	Introduce prospective students to the life on campus and deliver tailored learning activities	Prospective students	Increase students' awareness of various HE aspects (i.e., courses and entry requirements)

and tutoring systems or general academic support. Counselling is applied in a wide range of areas such as education problems, psychological issues, career guidance, and disability guidance and it can be used as a tool for reducing dropout (Wulz et al. 2018). Counselling can be provided by universities, private associations, NGOs, etc. and can support the increase in demand to access HE (Wulz et al. 2018). The counselling of prospective students can serve as a source of social capital for first-generation students (Pham and Keenan 2011) helping them to overcome a lack of social capital, assistance and advice from their families. Career counselling and personal development programs can also contribute in improving retention rates and results (outcomes). While in some countries universities have an obligation to provide counselling, in others—especially those with high demands to access HE—many private associations or NGOs provide it. Specific counselling is offered to different equity groups. Table 2 below exemplifies the different measures within this category implemented by universities.

The identified studies focusing on this category of measures show that they have a relatively positive effect on access. However, one should consider that *outreach initiatives* aimed at increasing interest in science and technology are evaluated either based on whether participants liked the activities or not, or based on changes in the enrolment of a degree program (Gumaelius et al. 2016). For example, the Stockholm

University summer school and the Praktikum UPV (at Universitat Politècnica de València) provide activities for prospective students closely related to universities' everyday activities, including the opportunity for school students to perform small research projects with Ph.D. students. Praktikum UPV includes a one-week stay for secondary school students within university research groups for fostering engineering and scientific vocations. Both initiatives measured the number of participants who chose to enrol in a STEM program at their university after the activities are completed. At Stockholm University, 12–14% of them chose to study a STEM field at Stockholm University, and 70% chose to do so at UPV (however, participants might choose to attend a STEM program at another university, which is not reflected in the percentage but could be considered a success).

Pekkala-Kerr et al. (2015) examined the impact of an *information intervention* offered by student guidance counsellors to randomly chosen high schools in Finland on the return to HE, including labour market prospects associated with post-secondary programs. The results show that on average, the information intervention did not affect the likelihood of being enrolled in a post-secondary program or the type of programs where students enrolled. Furthermore, the study shows that the application patterns among students graduating from the treatment and control school are indistinguishable from each other, but a third of the students reported that the intervention led them to update their beliefs regarding their return to HE.

In Germany, Ehlert et al. (2017) conducted a field experiment among high-school students from Berlin who had HE intentions to find out whether *information* deficits lower the likelihood of college-eligible students from less-privileged families to pursue their college intentions. The findings show an increase in the application rates overall, including for students without academic background parents, with one college-educated parent, though no significant effect when both parents have an academic degree.

A large-scale clustered randomized experiment (Abbiati et al. 2018) involving over 9,000 high school seniors from 62 Italian schools shows that overall, treated students (who were provided *personalized information* on the costs, benefits and chances of success in HE through three meetings) enrolled less often in less remunerative fields of study in favour of postsecondary vocational programs (the latter was mainly due to the offspring of low-educated parents). The study shows that children of HE graduates increased their participation in more rewarding university fields.

Looking at existing practices and needs in terms of *guidance* for inclusion in European universities, Cullen (2013) suggests that “institutions that adopt peer and mentoring support programs have lower rates of dropout” (cited in Wulz et al. 2018). More specifically, they are successful in preventing dropouts. Wulz et al. (2018) consider that counselling is an effective measure to widen participation in HE, together with the provision of student facilities (e.g. housing, medical support, childcare). 74% of the beneficiaries of student union counselling perceived it as useful (study referred to by Wulz et al. 2018).

Looking at the impact of Aimhigher (2004–2011) on widening participation in HE for young people from underrepresented groups (pupils aged 12–16 including first-generation students) in England, Doyle and Griffin (2012) find positive effects

on pre-entry *mentoring* (information advice and guidance) on students' aspiration-raising and access to HE when combined with other measures, such as campus visits or guest lectures. However, results of Aimhigher are mixed, with Doyle and Griffin (2012) finding positive effects for mentoring, but McCaig and Bowers-Brown (2007) finding no measurable impact but rather 'smoking gun' causal links between Aimhigher and enrolment.

To conclude, the seven identified studies show that the discussed measures do not have a strong potential by themselves but work best when combined with others. Personal and professional pre-entry counselling, mentoring tutoring systems, and academic support reach maximum results when complemented by a "school culture that values and promotes going into tertiary education, that sets high expectations for participation in higher education and offers a curriculum that attracts and supports students in their postsecondary and career development" (Salmi and Bassett 2014). Moreover, they are considered more efficient in systems that have a clear set pathway towards HE through secondary education (like Anglo-Saxon educational systems), and less in countries like Germany that select students for different streams of the system early in their educational careers (Usher 2015).

3.2 *Financial Aid Measures*

Initiatives addressing the financial barriers that students face aim at easing the financial pressure for students already considered eligible. They are either reimbursable or non-reimbursable. The latter are under the form of needs-based grants and scholarships that target students coming from families with lower income, certain ethnic minority groups or rural areas, women or students with disabilities. The alternative is often tuition fee waivers or subsidies for the traditionally underrepresented groups. All of them aim at eliminating the possibility that the low family income acts as a deterrent to access and success in HE. Reimbursable financial aid schemes (i.e., student loans) are sustainable forms of financial support requiring a lean administration setup, low subsidies and an effective recovery system. They are implemented differing in terms of the source of capital, the type of expenses they cover, the eligibility rules, the guarantees they require, and the repayment scheme (e.g. direct loans; loans guaranteed by the Government that are shared-risk loans; income-contingent loans). Table 3 provides several examples of the shape and dimensions of financial aid measures embraced by several universities.

Existing studies focusing on Europe show that the *amount of aid* had a direct effect on HE enrolment and access. Fack and Grenet (2015) show that a fee-waiver (which amounted to 174 euros) in France had small positive effects on enrolment in the first year of undergraduate programs, whereas the provision of 1,500 euros cash allowances to prospective undergraduate or graduate students increases their college enrolment rates by 5–7%.

Baumgartner and Steiner (2006) evaluated the effectiveness of a student aid reform in Germany that substantially increased *the amount received* by eligible students to

Table 3 Selected examples of financial aid measures

HEI	Type of measure and components	Target group	Intended goal(s)
Open University of Catalonia, Spain	Scholarships and online learning	Professionals, refugees and asylum-seekers, people with functional diversity	Providing flexible distance learning degree programs
Universities of Glasgow, York, Barcelona, Edinburgh, Sussex, Warwick	Scholarships (i.e., waiving fees, providing tuition scholarships, and offering free courses)	Refugees	Widen access and ensure participation
University of Vincennes in Saint-Denis, France	Scholarships for refugees with little knowledge of French—Diploma University (DU)	Refugees	Preparation for additional academic courses

raise enrolment rates into tertiary education. The study found that the reform had a small positive, but statistically insignificant, effect on enrolment rates despite the 10% increase in the federal students' financial assistance scheme.

Hatt et al. (2005) evaluated the Opportunity Bursary scheme (introduced in 2001), for students from low-income backgrounds where institutions were allowed considerable discretion over the allocation of these awards. The research reports differences in the way the two institutions—in the South-west of England—administered their bursary schemes, and the generated effects: bursary students from low-income backgrounds were more likely to continue beyond the year of entry than those students from low-income backgrounds who did not access the award. Moreover, it also revealed that the award of a *bursary* is strengthening the student's motivation to succeed and playing an active role in underpinning student persistence and success. Hatt et al. (2005) argue that there are two possible explanations for this effect upon HE continuation as the money might be useful and might strengthen the student's commitment to study.

Lannert and Garaz (2014) are tracing Roma Education Fund's (REF) Law and Humanities Program *scholarship* beneficiaries (awarded a yearly amount between 500–2300 EUR depending on the existence of a tuition fee and living expenses) in Moldova, Russia and Ukraine. Between 2004 and 2014, a total of 413 students benefited from the scholarship scheme. The results of their evaluation show that among these, 200 (48%) students obtained at least tertiary level degree with complete or partial LHP support, while 144 did not graduate yet but are still in the program. Also, 35 beneficiaries (8%) dropped out of their university studies before graduation or postponed graduation for later.

Since it was launched, in 2008, and until the summer of 2015, REF's Roma Health Scholarship Program (RHSP) provided support to 527 Roma medical students from

Romania, North Macedonia, Serbia and Bulgaria. The support can be operationalized as financial, academic and professional (i.e., scholarships—between 375 EUR and 5,360 EUR per academic year, preparatory courses, mentorship, advocacy camps and additional funding for courses, conferences and small community development projects). Out of the 527 beneficiaries, 146 (28%) were still in the program at the time of the study, 187 people graduated successfully with at least one degree and exited the program, 45 people interrupted their studies or dropped out, and 57 people continued their studies without RHSP support, and 86 people exited the program, but their academic progress and graduation status could not be tracked (Roma Education Fund 2015).

The evaluated evidence shows that the amount of the financial aid can have positive effects on enrolment, but, depending on the target groups and the field of study, financial aid measures need to be complemented by other measures in order to foster enrolment.

3.3 *Preparatory Courses and Programs*

Preparatory courses and programs aim to even out previous or existing inequalities with regards to prospective students' previous education (can refer to, i.e., the quality of previous education, switch of the field of study, the language of instruction, academic ability, etc.). They target first-generation and non-traditional students, disadvantaged and students who do not have any experiences with academia and HE. The general purpose of these measures is to enable the students to prepare efficiently to continue their studies towards HE. The format in which these courses and programs take place can differ from university to university (see Table 4): intensive academic courses in areas students would like to pursue HE studies, general academic preparation (academic writing, critical thinking and study skills), auditing courses, introductory semesters, language courses enabling students to pursue studies in English (or other) language, but also general application process support and information. Completing the program enables students to apply for university in various fields of study but also to gain first-hand experience and insights into a HE program. Last but not least, such measures could also contribute to enhancing students' familiarity with a HE environment and help them overcome (academic and social) integration barriers at universities.

In Germany, prospective refugee students—who are treated like all international students—during their application and enrolment, receive special support in order to deal with their specific situation. Since the entrance criteria for the preparatory colleges include advanced knowledge of the German *language*, special classes prepare them for the entrance test in order to enrol in the preparatory courses. According to Berg (2018), these preparatory colleges and courses can be seen as important institutions for the internationalization of German HE and the support of prospective refugee students.

Table 4 Selected examples of preparatory courses and programs

HEI	Type of measure and components	Target group	Intended goal(s)
Leuphana University, Germany	A first semester as an induction period	Mainstream students	Familiarity with academic life and reduce drop-out
Technical University of Munich, University of Tuebingen and Bielefeld, Germany	Free German language courses	Refugees	Prepares students for HE studies at German universities
Central European University, Budapest	Preparatory, non-degree language and academic courses, tutoring—OLive, Roma graduate preparation	Roma, refugees and asylum-seekers	Prepares students for HE studies at international universities
Brunel University, UK	Preparatory monthly sessions in key subjects, guest speakers and role models—The urban scholars programme	Prospective talented students from deprived areas	To increase achievement and HE aspirations
University of Vienna, Austria	Free academic courses—Open learning initiative	Individuals with refugee or asylum-seeking status	Preparation for the Austrian academic HE system pursuing
Frankfurt University of Applied Sciences, Germany	Intensive language course, attending modules over two semesters—Welcome year for refugees	Refugees	Offering the opportunity to take on or continue a degree course
Metropolia University of Applied Sciences	Training courses, application processes support	Persons with an immigrant background	Increase the ability of immigrant people to enter HE

The Roma Graduate Preparation Program (formerly known as the Roma Access Programs) at Central European University (CEU) is an initiative providing preparatory courses for Roma students. The program aims to prepare Roma university graduates across Europe—through *academic English, academic writing and tutoring in a field of choice*—to compete for master’s programs either at CEU or abroad. Since 2004, when it was founded, the program has enrolled 218 Roma students from all over Europe. Out of them, 215 graduated, and 141 (nearly 65%) were accepted into a master’s program at the end of their studies (Rostas 2017).

Pinheiro-Torres and Davies (2008) evaluate the Brunel University’s Urban Scholars Programme, a 3–4 year intervention aimed at *increasing achievement and HE aspirations* among talented students from lower socio-economic backgrounds and disadvantaged areas, aged 12–16. The paper discusses the emerging findings after

the first 2 years of the program and suggests the biggest change occurs within scholars' confidence. Updated, self-reported data shows that program leavers had a HE orientation of 88% after 3-years attendance, and almost half of them received offers of places in universities, and 83% of them started HE studies. Looking at the same program, Casey et al. (2011) found that it "had some success in steering students toward greater ambition and an awareness of the rewards of higher education" (p. 43), and that 90% of the students who participated and completed the programme either met or exceeded the school targets compared with 22% of the rest of the gifted and talented group who met or exceeded their school targets.

Walker (2010) investigates the academic performance of adults who entered the University of Glasgow via the Scottish Wider Access Programme (SWAP) between 1988–1993, including a *pre-university summer school* where non-traditional students (i.e., adults, with a socio-economic disadvantage) receive preparation and independent advice about opportunities to access HE. The findings show that there were few differences between the students who attended the summer school and those who did not—both dropped-out at largely the same rate. Recent self-reported data shows that, since the first pilot of SWAP in 1987, more than 32,000 adults have taken the SWAP route to return to study, and helped many adults realize their potential and given them the confidence to succeed in college or university. In general, preparatory courses and programs prove promising efficiency, however, this depends on their specific components.

4 Conclusions

Overall, this research found little publicly available studies and information about the actual outcomes of most measures. First of all, the identified studies cover a limited number of access measures available in Europe (i.e., none of the studies identified looked at the effectiveness of the widespread online platforms—most of them targeting refugees). Secondly, the existing studies do not provide a comprehensive geographical overview across Europe. With few exceptions, most of the identified research explores the context of the UK, Germany, France, Italy or Finland. This suggests that more evidence-based approaches will be necessary to effectively learn from these specific access measures.

The impact measurement is hampered by the impossibility of isolating the effects of such policies in order to attribute cause and effect, as well as by the difficulty of generalizing particular results. The current promising but limited amount of research in the European context shows that the most effective way to tackle unequal access to HE is the measures that combine financial assistance with measures that help to overcome non-financial obstacles. Success is also guaranteed by cooperation between governments, HEIs or other education providers, NGOs, public authorities (in fields like health or welfare that complement the interventions in education), families and/or private companies. Programs with a positive track record in terms of improving equity seem to be those combining financial support with non-financial aid offered

to students (Salmi and Bassett 2014) as well as those empowering students, setting high academic expectations and helping students and parents believe in themselves and in their educational success (Usher 2015). These latter ones tend to be more intrusive and require frequent contact with the targeted individuals—e.g. academic support, mentoring programs.

Usher (2015) contends that making definitive statements about “what works” is hindered by the impossibility to generalize particular results (i.e., issues of transferability in different institutional settings) and the tendency to re-define the term “equity” when results become inconvenient (i.e., politically unwelcomed results). Similarly, Claeys-Kulik et al. (2019) argue that the collection and use of data on equity are often subject to controversial discussions, and perspectives vary according to cultural, political and legal contexts across Europe.

Lack of adequate, reliable and consistently collected data is often used as an excuse for the lack of action towards more equitable systems, but it also hinders the option of evidence-based policy-making or of measuring the impact of the initiatives already put into practice. Referring to specific measures targeting refugees, Streitwieser et al. (2019) argue that while sponsors described their plans for supporting refugees, they often do not share the amount of funding, the number of beneficiaries impacted, and other key data.

To conclude, this paper addressed a question about the relative effectiveness of various university-level access measures for underrepresented groups. The inference that can be made from this literature review is that all measures have a limited effect when implemented solely. More profound effects can be reached when the access measures are implemented in combination with each other, accounting also for the field of study and underrepresented group in focus.

The recommendations to policy-makers would include using, developing and ensuring prospective students’ access to both financial and non-financial aid measures *in their combination*. The measures that have been already developed and validated at other, but similar context could be put in practice first. Development of new measures, their constant evaluation and extensive research on their effectiveness should be encouraged both by the HEIs themselves and national governments.

Acknowledgements The paper developed under the European Universities - Critical Futures project at Aarhus University, Denmark

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