

ICT as a catalyst to enhance equity in European higher education: which way forward?

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In the present paper we will present some considerations of the state of the art of equity in higher education in Europe, as resulting from the research run by the EQUINET project in 2010, and we will try to link them to the contribution that a meaningful use of ICT in HE settings can give in order to close the existing gaps in terms of equal access to European HE by all interested European citizens.

1. The EquNet network: an independent view to equity in European higher education

EQUINET is a 3-year project researching the state of equity in Higher Education in Europe. The EQUINET project was conceived as an independent research and networking initiative, with an aim to increase access to Higher Education for all marginalised and non-traditional groups based on a principle of equity. With the help of European Commission funding under the Lifelong Learning Programme, the project has brought together a consortium of renowned research organisations and stakeholders' representatives, ensuring a sound methodological base for the research and a wide audience to which to distribute the project recommendations.

As originally conceived, the EQUINET network is committed to identify and analyse barriers to equitable access to HE arising as a result of:

- Educational background (issues revolving around recognition of non-formal and informal education, or non-traditional types of formal learning such as access for young persons who have been schooled at home, and distance learners);
- Socioeconomic conditions (issues revolving around access for people in employment, with family commitments, coming from divergent income groups, by level of dependency upon parents, etc.);
- Structural problems in Higher Education (dealing with issues such as curricula, governance structures, admissions standards, funding policies, etc.).

In terms of its networking activities, the EQUINET consortium believes that in order to have an impact on equity in Higher Education, as on any complex and multifaceted societal theme, it is fundamental to involve all possible categories of stakeholders and to mobilize all the existing advocacy and decision making energies and dynamics that lay around the theme. Given the specificity of the theme addressed, EQUINET neither intends to create a "new" network nor a "network of networks", but rather to represent a thematic hub where institutions and individuals working on Higher Education and peers working on equity-assurance can meet, exchange knowledge, and shape a more equitable future for European universities.

In October 2010 EQUINET produced its first research report, aggregating data from a number of sources, for the purposes of summarizing the status of access to Higher Education in Europe, and how it relates to equity, and secondly to understand the strengths and weaknesses of the current data gathering systems, so as to understand the first-hand, the issues faced with trying to measure, and eventually, trying to set out an indicator on equity in Higher Education. This is the first of three annual report, and gives a general overview of

the access to Higher Education in Europe, including entry into Higher Education, equity as defined by socioeconomic background, income and expenditure of students in HE and the effect of work on studies. The next two reports (to be published consecutively in Autumn 2011 and 2012) will focus more directly on specific issues within the field, including a) Trends in thinking from the side of the policymakers, b) Best practices in improving equity in the various countries, c) Theoretical foundations for future equity policies and d) Ways to measure progress and impact of policies on equity.

2. State of art of equity in European higher education

First, we must place the issue of HE equity in the broader actual socioeconomic and political context in Europe at, which is currently dominated by four factors, namely:

1. The stated political imperatives to develop a high-skill, or knowledge-based economy, to improve European competitiveness in the global context;
2. The austerity measures being undertaken by member states throughout the EU, and consequent severe limitations on public finances, particularly in light of the financial crisis of the last two years, and the ensuing slowdowns in economic growth throughout Europe;
3. The continued European integration in the field of Higher Education, brought about by the continued expansion of the Bologna Process and the expanded powers of the Union after the Lisbon Treaty;
4. The continued massification of European Higher Education, driven by explicit policies to expand Higher Education across the EU.

Against this background, the EQUINET research team has run an in-depth analysis of a number of national and European sources, and has come out with a set of conclusions, that we will report in the following paragraphs. Similarly as in the EQUINET report, the conclusions are presented as “Issues”, since they want to represent starting points to debate and discuss how to improve the identified situations in line with the context and policy priority described above.

Issue 1: The EU-27’s Higher Education Area is not equitable

Taken as a whole, the EU-27 shows wide divergences in the level of equity of HE systems, a fact confirmed consistently by every indicator considered in the EQUINET analysis report. Using the indicator of parents’ educational and occupational background, it is found that the Netherlands, Finland, Sweden and Ireland have shown the most progress in bringing about an equitable system, while Bulgaria, Latvia, the Czech Republic, Slovakia and Germany have made least progress. A high correlation exists between overall funding levels of Higher Education and the level of equity/inequity. Thus, all four of the countries with the least inequity are also amongst the highest spenders on education, both in terms of % of GDP as well as on a EUR/capita basis. With the notable exception of Germany, those at the bottom of the list also show some of the lowest investments in Higher Education.

Issue 2: EU Policies have been largely ineffective in addressing equity issues

Two recent studies commissioned by the European Commission found no link between Governance and Funding strategies promoted at EU level by means of the “Modernisation Strategy for Higher Education”, and access to HE (Jongbloed et al., 2010). In the various policy documents linked to Higher Education issued by the European Commission in recent years, only two concrete proposals are made in relation to equity, namely that

of generating higher investment in education through the introduction of tuition fees, and the offering of a more differentiated range of provision (Commission of the European Communities, 2006). The increase in the level of private funding is one of the elements of the modernisation strategy for education examined by the abovementioned studies, and, both when taken individually, as well as a part of the modernisation strategy as a whole, the study also finds no link between such a strategy and increase in access, let alone increases in equity. Similarly, the “Independent Evaluation of the Bologna Process” finds that despite the fact that the first references to “Providing appropriate studying and living conditions for learners to overcome obstacles related to their social and economic background” ('Bologna' Conference of Ministers responsible for Higher Education, 2003) appeared in 2003, policy actions have been too late in coming to do any meaningful type of assessment on them. Similarly, it also finds that there is as of yet no evidence of access being widened, or increased inclusion of disadvantaged groups. (Westerheiden et al., 2010).

Issue 3: Equitable access is increasing, but slowly

The EQUINET research found that the proportion of students from lower socioeconomic backgrounds accessing Higher Education has increased in absolute terms over the past decades. This said, this proportion has been increasing slowly, and assuming the current rate of progression continues, it would take around 100 years for such students to reach the same participation rates as those from high socioeconomic backgrounds. This echoes the numbers found by other recent studies in the field (Koucký et al., 2010).

Issue 4: Elites within Higher Education are a barrier to knowledge-economy growth

Skill-forecasts for the EU-27 show that the number of management-level in Europe until 2020 will more or less remain constant, with the main engine for growth will be for the jobs of ‘Professionals’ and ‘Technicians and Associate Professionals’, both of which are mainly composed of university-degree level jobs. Throughout the findings of our study, we note that the highest growth areas in terms of labour market participation, is in the field of ‘technicians and associate professionals’, which is ranked third out of nine in terms of occupational statuses. Since, the highest stratum (i.e. legislators, senior officials & managers) will experience next to no growth, and the second (i.e. technicians and associate professionals) only mild growth, equality of opportunities will require that the current attitudes towards subject and profession choice, especially amongst students from higher socioeconomic backgrounds, be changed (any idea how? It might be interesting to propose alternative domains, careers to this point... Without such reform, a barrier to entry to the highest level of professional status risks being created.

Issue 5: The STEM skill-gap is largely an issue of gender equity

The report shows an over-representation of females in teacher training, healthcare and the humanities while an underrepresentation of females in science, math and computing as well as in engineering. Europe’s skill gap is largely made up of a lack of graduates in the latter two fields. Thus, within this context, it emerges that the overall issue of skill mismatches is actually a matter of gender-related skill mismatch. For example, an industry study shows that between 1999 and 2003, the EU-15 fell short in producing 200,000 graduates with e-skills per year, meaning an increase in the skill gap of over 800,000 graduates in 4 years (ICT Skills Monitoring Group, 2003). This figure is nearly equal to the over-supply of female graduates in the field of education & training.

Issue 6: Young persons from lower socioeconomic backgrounds are significantly disadvantaged

A student from a low socioeconomic background, in Europe is, when compared with his or her peers: a) Less likely to attend Higher Education, b) Likely to choose different courses of study, c) More likely to work during studies and d) Far less likely to have a mobility experience. Consequently, they are more likely to become

unemployed, more likely to earn less, and, assuming equity continues to increase at the historical pace, more likely to have children who also underperform.

Issue 7: Public funding decreases income disparities between students

Our report shows that the income disparities between students are lowest in Sweden, Scotland, Germany, the Netherlands, Finland, France and England/Wales. The countries that provide the largest levels of student support as share of student income are Sweden, Denmark, Switzerland, England/Wales the Netherlands, Austria and Finland. While no empirical data can be uncovered as to the consequences of such a relation, it can be surmised that improved income equity amongst the student population also results in equity in a host of 'learning environment' factors related to student life, such as lodging, social life (including civic participation), access to educational tools/materials (such as computers), mobility opportunities, etc., and thus presumably improving equity of opportunity amongst students.

Issue 8: Age-related inequity remains a barrier to workforce re-skilling

Despite the on-going roll out of systems for Recognition of Prior Learning and Informal Learning, the EQUINET study shows that overall participation of adults, either as a first Higher Education experience, or as a return to education, while increasing, remains low. Taken against a backdrop of overall up-skilling of the workforce, together with violent drops in employment and predictions of sustained economic weakness in the short to medium term, this is of special concern. While even within the context of lifelong learning, it is expected that the 18-25 age group would have by far the highest participation rate in Higher Education, we can deduce the presence of age-related inequity from the numbers of older persons who would stand to benefit from Higher Education and have the theoretical opportunity to do so, but do not choose to participate.

Issue 9: Cultural Attitudes significantly affect participation

Statistics for EU OECD members show that for a person over a lifetime, the net gain of participation in Higher Education (after taxes, school fees etc.) is around 90,000 EUR (OECD, 2010). While it is clear that multiple entry barriers may exist for students with a lower socioeconomic status, including funding limitations, quality of primary and secondary schooling, at-home learning resources available etc., rational choice theory would seem to dictate that a higher percentage of students would overcome these barriers, than those which this report shows actually do, considering the significant and incontestable monetary benefits of Higher Education (not to mention the numerous other non-monetary benefits). The uncontrolled-for variable here is that of 'cultural capital', which, judging by participation rates, seem to show very significantly affects access to Higher Education, as evidenced by variations in PISA scores based on elements of cultural capital.

Issue 10: A high net entry rate does not necessarily indicate an equitable HE system

When comparing the best - and worst - performing countries, defined as a compound indicator of parents' occupational and educational status, with the overall net entry rates, one finds little to no correlation, indicating that policies to increase overall participation, do not necessarily benefit the most disadvantaged groups.

Issue 11: Validation of Prior Learning Seems to Improve Equity in Higher Education Systems

Our data leads us to hypothesise a link between recognition of prior learning (RPL) and equity. Five of the worst-performing countries on our occupational/educational status equity indicator (Germany, Bulgaria, Czech Republic, Latvia, Slovakia) show practically no entries to Higher Education through this type of alternative route. Consequently, countries with developed RPL systems also perform better on the equity indicator. Data

on RPL is not extensive enough to definitively confirm this hypothesis; however the data available does indicate a strong probability of its accuracy.

Issue 12: Economic recovery is to a large part an issue of educational equity

While an element of Europe's much vaunted 'growth and jobs' policies for the last several years, the demand for a shift in Europe's skill base has grown sharper, due to the tectonic shifts in the global economy thanks to the financial crisis, and especially due to a drastically changed employment landscape owing to the mass lay-offs that ensued from the crisis. Taken in this light, it becomes clear that Europe's skill challenge and the aim of reaching an equitable Higher Education system are intrinsically linked, and need to be dealt with in concert.

3. Can ICT help increasing equity?

The question whether a proper use of ICT can increase the level of equity of a university or of a HE system is not trivial and cannot be answered simply by relating ICT with higher system effectiveness and therefore with increased equity, for at least two reasons. First, because the issues presented above are "structural" issues that have to do with the whole HE system in Europe and are therefore not simply linked to how effective a university is its use of resources, and second, because increasing the use of ICT can represent - in the mind of some decision makers - a way to save money, and therefore could bring to a further decrease of the funds for HE.

In our understanding, the introduction of ICT in university practices can have an impact on existing "working cultures" of academia much beyond the increase of effectiveness, and at the same time is an issue that must be dealt with care, not to fall in the "trap" of ICT as a cost-saving tool. To understand how ICT can have an impact we must move from the macro and meso level – the level of the issues presented before – to the micro level of the daily practice at the university. If we classify the reasons why students from disadvantaged groups have a lower rate of attainment depending on the reasons or barriers that prevent these students from participating, we see that ICT can have an impact on most of these barriers, such as poor guidance services at a lower secondary level, achievement and progression in the study career, individual responsibility and self improvement, employability and active citizenship

No need to say, ICT cannot solve "structural" problems such as the lack of family perception of the benefits of higher education degree, but can contribute to equity along a number of key dimensions, that we will present hereby.

- ICT can make teaching and learning more flexible and individualized. Equity is not only a problem of access to HE, but also a concern to make sure that all students are facilitated in their learning and personal development process in line with their individual characteristics. A proper use of ICT, as shown for example by the work of the HEXTLEARN project (www.hextlearn.eu), can increase the flexibility of the learning offer of universities, contributing to decreasing the dropout rates.
- ICT can support the modernization of assessment procedures. Traditional assessment methods can represent a barrier to fruitful completion of HE study by some students, especially by the ones who work during university. Adopting peer-based assessment and fostering documented self-evaluation – activities that are increasingly based on an open use of ICT - can help them in not abandoning HE and can motivate them to engage in further university studies.
- ICT can contribute to overcome physical barriers. This is true both for students that for disability reasons cannot access university courses (some cases are reported in the website of the Agency for Special Needs Education) and for students that cannot participate in international mobility exchanges for whatever

reason. In both cases, a proper use of ICT – when it does not totally substitute but it complements face-to-face participation – can increase equal participation in higher education.

- ICT can help breaking down cultural barriers. EQUINET found that one of the reasons for the lower participation of citizens with low-social background is the perception that these citizens – parents in particular – have of university study, as a “non-productive” and expensive life path. Using ICT communication tools and especially social platforms can be a way for European universities to reach these people and to produce a mentality shift towards the real value of HE studies.
- ICT can make guidance and counseling more effective. This can be done by complementing existing physical guidance activities such as information days and HE fairs with ICT-based information provision; not only this information can be customized, for example depending on the preferences of the students or on her/his best performing subjects, but they can accompany students along their secondary school career.
- ICT can facilitate the recognition and accreditation of prior learning. The use of ICT tools such as e-portfolios - as well as an effort to make these tools interoperable with the systems of European universities – can facilitate meaningful entry into HE from non-conventional paths and can therefore increase LLL rates in Europe, by smoothening the relations between the world of higher education and the world of work.

Policies and initiatives at EU and at national scale as well as incentives are the ground on which the increasing of participation in HE is built, and therefore should be the starting point for further support to meaningful and open use of ICT along the above dimensions. The next EQUINET reports, as well as the activities of the EQUINET network, will represent an advocacy base for this increase in the attention of policy to ICT use as a catalyst to increase equity in European higher education at all levels.

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