

## SUMMARY

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### HIGHER EDUCATION AND SCIENTIFIC POLICY

This special issue of *Educatio* edited by *Tibor Péter Nagy* and *István Polónyi* illustrated various relationships in higher education policy with the help of the six studies published.

*Pál Tamás's* article entitled *New scientific policy with old evaluation methods? Central European dilemmas* established that at the beginning of the 90s the traditional research and development statistics had become outdated, since they did not reflect the continuing globalization of the processes of research and innovation. The study reviews the indicators of research and innovation and the philosophy of evaluation. It shows that the results of the Community Innovation Survey (CIS) – developed in the mid 90s, and since accepted as a yardstick – are only rarely reflected in the contents of the documents of the national innovation policy, which is due to the fact that the indicators are missing from the modern scientific policy decision framework. The study urges that in the next CIS the Hungarian national data collection should be harmonised with that based on OECD countries' experience, which could contribute to the establishment of a similar points system for innovation-policy decision-making in Hungary.

According to the author, new indicators would not necessarily mean new evaluation points, but rather a movement towards a complex set of indicators, since they would allow opportunities for policy evaluation (e.g., the measurement of diffusion). It seems particularly important for Hungary to establish these evaluation points, which would be capable of measuring appropriately the innovation performance of low- and medium technology sectors and firms. Innovation efforts whose worth is undisputed, and which are not at the highest level of technology must also be measured, supported and rewarded. Organisational innovations, informal types of learning, the development of human capital, capabilities and the development of capacity are all included within this area.

In conclusion the article emphasises that we must leave behind the simple input/output criteria and simplified cost calculations and must conceptualize productivity (the productivity of research) in a new way. In addition to economic indicators, there is an ever greater demand for evaluation methods of wider effects.

*Ildikó Hrubos* begins her study entitled *The evaluation and measurement of diversity, an attempt to categorise European higher education institutions* by showing that during the process of the mass diffusion of higher education a differentiation between higher education institutions also began. This process accelerated following the year 2000 with the so-called Bologna Process and the globalization of higher education. The great diversity in objectives established, main activities, target client groups, academic performance and social prestige have created a con-

fusing picture, since they make it difficult to study the way the sector really operates. The study briefly introduces the processes behind the phenomena and the varied attempts so far made to describe, analyse, handle and research them. She deals in more detail with the large-scale European project which aims to create categorizing and data-collection methods with strong theoretical and methodological bases, as well as the development of an organisation to operate the system on a permanent basis. The Classifying European Institutions for Higher Education – CEIHE – project began in 2004 and the final stage (III) started in 2008. During the development of the model the well established and internationally renowned Carnegie Classification System, developed in the United States, was used as a model. It should be emphasised that the model is not a league table, not a hierarchical, but an analytical system. The operation of higher education institutions is described in 14 dimensions and with 30 indicators. On the basis of the data supplied by institutions who enter the system voluntarily, the main types can be identified. The continuous operation of the ranking system makes the performance of Europe's higher education institutions visible, giving important information to stakeholders, and for higher education- and scientific policy; for researchers it makes concrete international comparative analyses possible. The introduction of the system conceived during the project, and by and large accepted by the main participants in European higher education, has however raised further questions. Who selects the members of operating body, a non-profit organisation independent of government and stakeholders which has executive and supervisory rights? Who controls the data? What does independence really mean? The issue of financing will be decisive in this respect. The European Universities will probably wait outside the system and will not join hurriedly. It is the elite and researching universities who are more likely, and in more explicit form, to express their reservations. Their reaction is understandable: the multidimensional and empirically-demonstrable system could reduce the basis on which they are differentiated and relativize the significance of their research and academic activities. From another perspective, universities with a less established reputation may justly fear the great openness characteristic of the system.

*Annamária Inzelt, András Schubert and Mihály Schubert* in their study *Co-operation between university and non-academic experts (as reflected by 12 scientometric indicators)* analyse the nature of the publications co-authored by Hungarian university researchers and non-academic experts. The main method of the article is the analysis of scientometric indicators measuring academic activities. The 12 Hungarian universities used as a model were responsible for 90% of all Hungarian higher education publications in the WoS database between 2001 and 2004. The authors established that the citation rate of internationally co-authored papers was higher than domestic ones whether the partners were academic or non-academic. The citation rate for publications involving a foreign industrial or health-sector partner was five times greater than for those involving partners working

in the Hungarian non-academic sector. When universities were studied according to their academic disciplines, it was found that the research performance of universities with technical and other faculties (but not medical) may play a more important role the development of domestic innovation than universities with a medical faculty. The international reputation of Hungarian academic performance in medical sciences is, however, greater than for technical universities. The analysis of citations shows that foreign industrial partners have a greater desire for new knowledge, for innovation activity based on new knowledge, and are better integrated into the international research network than domestic partners. The indicators also suggest that the relatively low citation rates of papers co-authored by Hungarian industrial partners is not only due to the lack of international integration and low level of innovations, but also to the fact that these co-operative projects support research into small-scale modification-type innovations. On the basis of the data it can be deduced that university research co-operation is divided into two categories according to whether there are domestic or international, the former more often involved in modificatory research, while the latter active in developing radical innovations.

János Rechnitzer's study *Changes and links between the higher education network and regional networks* shows that the attention of Hungary's academic community in the regions has become increasingly focused on higher education. The author finds that throughout Europe the dominance of the capital city is decreasing significantly in higher education, and also that the regional influence of higher education is increasingly felt in the development of individual regions, and these phenomena make necessary the inclusion of regional structures in national higher education and technology policy. Analysis of Hungarian higher education shows that here too great changes have occurred since the changes of 1989–90. Alongside the mass expansion of higher education the Bologna-style course has been introduced, and new types of course (distance learning, e-learning) have been adopted. The demand for higher education services has been accompanied by a territorial reorganisation too. Although Budapest still maintains its leading role, the traditional provincial centres of higher education have seen their position strengthened. At the same time the manifestation and spread of the regional role is only moderately reflected in the formation of the higher education network. Only in the last few years have we witnessed the development in higher education of concentrated support and co-operative research centres (Concentrated Co-operation Research Centres; to reinforce links between firms and higher education) and Regional University Knowledge Centres (co-operation between firms, higher education and other research institutes). These centres can increase the integration of higher education into the regional economy. The study closes by establishing that regional policy and higher education policy have not been working in harmony over the past two decades.

*Tamás Kozma – Gabriella Pusztai: Who owns the doctoral school? The echo of an accreditation* summarises the results of a questionnaire investigating the process of accreditation completed by members of Hungarian doctoral schools.

In the course of the 2008 accreditation of the doctoral schools in Hungary, 577 senior lecturers were questioned on-line about their experiences and opinions of that process. 65 % of them were approved, 23 % approved temporarily, while 12 % of them were rejected by the HAC (the Accreditation Committee of Higher Education in Hungary). According to the lecturers, the most important criteria for being a supervisor in Hungary are: academic degrees (77%), on-going publication activities (71%), on-going research activities (63 %), participation in international academic activities (59 %) and international networking (50%). The overwhelming majority of the approved lecturers happened to be natural scientists, engineers and medical researchers. They belonged to the senior generation of university lecturers (between 51 and 70) and were mostly male teachers (81 %). Those rejected were mostly female, from the humanities and the social sciences with a typical age of 40. These results suggest that a) the criteria were mainly set by senior male members of the accreditation committees with a natural science background; b) the accreditation had a selective, rather than a supportive character with c) a strong concentration on the teachers rather than the students (and their opinions) of the doctoral schools. In view of the Bologna-process, the importance of an alternative accreditation process with a supportive rather than a selective character is stressed.

*Tibor Schwendtner's study Knowledge factory or university; hermeneutic considerations of the higher education* starts from the observation that behind opinions expressed in current debates about university policy there are frequently unspoken philosophical assumptions. One characteristic viewpoint is that the university is nothing but a large knowledge-creating factory, with the almost exclusive objective of trickling down into students' heads specialist knowledge that can be applied to clearly delineated fields of work. The article attempts to show that this position is based on a positivist philosophical concept, according to which knowledge operates on the basis of abstract logic and value-free facts. Against this, however, the anti-positivist philosophy – first associated with Thomas Kuhn – and the hermeneutics of knowledge linked with this, paints a picture of knowledge as first and foremost a transformation of habits brought about by an academic course. The habits formed by academic preparation which, besides the important abilities of critical thought and creativity is also characterised by the ability to move and translate between the various traditions, perspectives and discourse styles, do not just make it possible for participants to be active in their narrow field of specialisation, but also to feel at home in widely differing fields of work and aspects of life. If we conceive of universities not as knowledge factories, but as the kind of institutions which create traditional knowledge habits, then we must also rethink the tasks related to the reform and improvement in the mass expansion of the universities.