CORVINUS
UNIVERSITY of
BUDAPEST

Center for International Higher
Education Studies

In search of excellence in higher education

June 2019

Center for International Higher Education Studies
Corvinus University of Budapest

In search of excellence in higher education

June 2019

Editors: Gergely Kováts, Zoltán Rónay
CIHES book series 3. / NFKK kötetek 3.

ISSN 2060-9698
ISBN 978-963-503-779-7

Responsible for publication: András Lánczi
Technical editor: Gergely Kováts
Proofreading: Timmur Ray Ponder

Published by: Corvinus Universy of Budapest Digital Press
Printing manager: Erika Dobozi

Table of Contents

Authors/Editors

DEMETER KARÁSZI, Zsuzsanna, University of Debrecen, Hungary
DIÓFÁSI-KOVÁCS, Orsolya, Corvinus University of Budapest, Hungary
DOSTÁL, Jakub, College of Polytechnics Jihlava, Czech Republic
FARKAS, Gabriella, Óbuda University, Budapest, Hungary
HARMAT, Vanda, Corvinus University of Budapest, Hungary
HORVÁTH, András, Óbuda University, Budapest, Hungary
HORVÁTH, Noémi, Budapest University of Technology and Economics, Hungary
HRABÉCZY, Anett, University, of Debrecen, Hungary
HUJÁK, Janka, Pannon University, Veszprém, Hungary
HUSZÁK, Loretta, Corvinus University of Budapest, Hungary
KAZAI ÓNODI, Annamaria, Corvinus University of Budapest, Hungary
KECZER, Gabriella, University of Szeged, Hungary
KÉRI, Anita, University of Szeged, Hungary
KLÉR, Andrea, Corvinus University of Budapest, Hungary
KOMÁROMI, Boglárka, Corvinus University of Budapest, Hungary
KOVÁTS, Gergely, Corvinus University of Budapest, Hungary
KUN, Zsuzsanna, Corvinus University of Budapest, Hungary
LUKÁCS, Eszter, Széchenyi István University, Győr, Hungary
MAIOR, Enikő, Partium Christian University, Romania
MOLNÁRNÉ SÁLYI, Anna, University of Pécs, Hungary
MOLONTAY, Roland, Budapest University of Technology and Economics, Hungary
MUZAFAROVA, Taisia, Eötvös Lorand University, Budapest, Hungary
NAGY, Judit, Corvinus University of Budapest, Hungary
PECAKOVSKA, Suzana, Foundation Open Society-Macedonia, Macedonia

POGATSNIK, Monika, Óbuda University, Budapest, Hungary
PUSZTAI, Gabriella, University of Debrecen, Hungary
RÉVÉSZ, Balázs, University of Szeged, Hungary
RÓNAY, Zoltán, Eötvös Lorand University, Budapest, Hungary
SZABÓ, Mihály, Budapest University of Technology and Economics, Hungary
TOARNICZKY, Andrea, Corvinus University of Budapest, Hungary
TÓTH, Georgina Nóra, Óbuda University, Budapest, Hungary
VAJDA, Éva, Corvinus University of Budapest, Hungary

Preface

In 2017 Ulm University organized the 1st Danube Conference for leaders, policy makers and researchers of higher education from the Danube countries. The Corvinus University of Budapest carried on this initiative by organizing the 2nd Danube Conference in cooperation with Ulm University and with the generous support of Péter Horváth Foundation.

Higher education systems and institutions have been under the constant pressure of performance and efficiency since their considerable expansion in the 1990s. This pressure increased in the last decades as a result of the financial crisis, the spreading of international and national rankings, and the growing competition for international students.

The main focus of the conference was to identify and present good management and policy practices, which could be interesting for other countries and institutions. The cultural proximity of the Danube countries provides an opportunity for the successful adaptation of such good practices.

Therefore, the conference was intended to provide publicity for these practices. However, the book is not only the summary of the conference presentations, but an individual volume of seventeen completed papers authored by thirty-two scholars from four Central and Eastern Europe countries as well. Although papers were written on various topics, there is a common notion in all of them: they wish to explore what makes higher education institutions (or systems) excellent.

The first chapter discusses various challenges leaders and policy-makers face on the system and organizational level from quality assurance to business-university collaborations, from early-career researchers to supervising bodies.

The second chapter focuses on the connection between teaching and excellence. This relationship is based on two different points of view. Teaching is one of the main tasks of higher education institutions which aims to increase excellence, that is, develop individuals as well as society as a whole. However, teaching also contributes to the excellence of the institution. The chapter includes papers about teaching methods, program developments, quality assurance, and rankings.

The third chapter leaves the national context and discovers the international dimensions of excellence. Studies are looking for the answer to the question of how internationalization can influence the excellence of the higher education institutions, of the

students, and how the higher education institutions can handle the difficulties stemming from students with different nationality and background.

Most papers focus on real practices and good practices. Even if some of the practices are less successful than others, we hope there is a possibility to learn from each of them.

Finally, we would like to express our gratitude to Prof. Dr. h.c. mult. Péter Horváth for his generous support, which made possible to organize the conference and to compile and publish this volume.

Gergely Kováts and Zoltán Rónay

Challenges on System and Organizational Level

The Curse of the Small Countries: Trends, Challenges and Perspectives in the Development of a Macedonian Higher Education Quality Assurance

Suzana PECAKOVSKA

Abstract

Macedonian higher education quality assurance system is regulated according to the "general model" (van Vught & Westerheijden,1994), while its development recognizes five development phases from the country independence to date. As the mechanisms for oversight and control of higher education are changing according to the societal and political trends (Neave-Van Vught, 1991), the dominant tendencies and challenges have also changed in each of the phases. From the enthusiastic establishment of two separate national bodies and the first external evaluation cycle conducted nearly two decades ago, Macedonian higher education moved into a phase of rapid expansion, growth and dispersion at the expense of quality. The merger of the two bodies for quality assurance into one, introduction of national university ranking and fines was followed by overregulation and increasingly challenged university autonomy in the context of a "captured state". Whilst the most recent Law on higher education opened the window for the independence of the national agency, the lack of objective judgment in quality assurance processes remains to be a challenge for a small country like Macedonia. Higher education institutions should be supported for the introduction of efficient internal system for quality assurance, whereas the sufficient financial, human and technical resources would provide for agency' operational independence and efficiency. External evaluation of all (public and private) universities by EQAR registered agency would provide unbiased quality assessment and evidence for improved quality regulations and informed decisions on optimization of the existing diverse network of institutions, study programs and profiles.

1. Introduction: About Macedonian Higher Education

With a population of 2.022 million, Macedonia is a small country that during the last decade faced a serious challenge of the proliferation of tertiary education institutions. Today, there are 28 accredited higher education institutions (HEIs) - 6 public universities, 19 private, 1 public-private non-for-profit university and 2 religious' faculties. The research institutes are primarily focused on the provision of second and third cycle studies. The academic staff consists of 4,130 university teachers and associates, while the research community consists of 3,311 scientists (State Statistical Office, 2017). After the number of tertiary students in the period, 2000-2015 was doubled increasing from 37,000 students in 2000 to 62,898 students in 2014/15; it remained steady at 58,000 students in 2016/17. 84.7% of the university students study at public, and 13,9% attend private universities (State Statistical office 2017/2018). Yet, the gross enrolment rate remains short of 34.2% in 2016/17 (39.2% for females) alike the net enrolment rate of 26.3% (30.9% for female students). Tertiary education attainment of age group 30-34 is 28.6% (Eurostat 2015).The number of tertiary graduates per 1000 inhabitants aged 20-29 in Macedonia has increased from 12.2 in 2000 to 26.8 graduate students ISCED level 5 and 6 in 2008 (Eurostat–UOE 2008). Investment in higher education is 0.4% of GDP in 2015, low compared to the OECD average of 1.1%.

The Republic of Macedonia joined the Bologna Process in 2003, aligning firmly to the key Bologna goals on: the introduction of three cycle system and a system of easily readable and comparable degrees, quality assurance (QA) ensuring mobility of students, teaching staff and professionals, promotion of European dimension in higher education. The university in Skopje that is the biggest and oldest university in the country shows the weakest performance of all main universities from ex-Yugoslavian republics at all global and/or European university rankings. World Bank reports point out the insufficient expansion,poorquality and relevance and low research outputs as the main issues for the overall poor performance of Macedonian tertiary education. Skills mismatch, and the inability to adopt modern pedagogical practices that can enhance the students learning outcomes and their competences led to 30% of unemployed university graduates in the country. As a result, many graduates decide to leave the country and seek employment abroad.

Macedonian higher education quality assurance was introduced in 2000 with the first Law on higher education (LHE) and further upgraded with the new laws and law amendments. "It is regulated according to the 'general model' of quality assessment (van Vught & Westerheijden, 1994) with the following model elements: (1) national coordinating body; (2) institutional self-evaluation, (3) peer-review external evaluation and (4) published reports." (Pecakovska S. and Lazarevska S. 2009:40). Current higher education law

provides for accreditation (of institutions and programs) mandatory self-evaluation of the higher education institutions every 3 years, external evaluation every 5 years and national ranking every 3 years.

2. Methodology

This paper provides an overview of the development, key trends and challenges of Macedonian higher education quality assurance from the country's independence to date. In order to generate the data needed, the paper uses a mixed method perspective, a combination of desk research, review of a European set of policy documents, researches and studies, a national legislation and policy analysis as well as the findings from existing research (see Pecakovska 2015 for details). The paper also uses the findings from ten semi-structured interviews with experts and academic faculty that have been or still are involved in quality assurance processes in different capacities as members of former bodies (of the Evaluation Agency and the Accreditation Board) and current Higher Education Accreditation and Evaluation Board (HEAEB), members of the self-evaluation commissions, representatives of university governance structures and other people from the academia. The purpose of the interviews was to identify the dominant trends in each development phase of Macedonian HE QA, to examine their key characteristics, the rationale and the underlying causes behind them.

3. Developmental Phases, Trends and Challenges of Macedonian Higher Education Quality Assurance

The development of Macedonian higher education quality assurance can be divided and described in the following five stages: 1) Introductory stage (2000-2008); 2) Backsliding stage (2008-2010); 3) Status quo stage (2010 -Oct. 2011); 4) Captured higher education in a captured state (2011 - 2017) and 5) Period of new opportunities and high expectations (2017-to date).

3.1. Introductory stage (2000-2008)

The first higher education law from the country's independence (Official Gazette 64/2000) introduced the quality assurance concepts and two national bodies – the Accreditation

Board (AB) and the Evaluation Agency (EA) with a moderately clear mandate and sometimes overlapping division of tasks. AB was established on November 2001 as an independent body consisting of 15 members - 9 from the Inter-university conference (IUC), 2 from the Macedonian Academy of Science and Arts and 4 from the Government. The EA was established by the AB with a four-year mandate to monitor the work of accredited HEIs, to evaluate its functioning, the quality of teaching staff and to provide the AB with recommendations for awarding or rejecting the accreditation. Both bodies consisted of university staff that were in a position to influence accreditation outcome for their home HEIs.

This stage was earmarked by the enthusiasm of the relevant stakeholders about QA and involvement of the national and international donors and organizations in support of emerging QA processes. Aimed at conducting the first evaluation cycle of Macedonian HEIs (self-evaluation and external evaluation), the donor-funded project carried out by the EA (2002-2004) commenced initial training for HEIs representatives of the self-evaluation commissions with technical assistance from the experts of the French and Dutch National QA Agencies (CNE and VSNU) as well as of EUA and Council of Europe. Mixed groups of domestic and foreign faculty served as members of the review panels of the first external evaluation of HEIs from both state universities at the time. The first external evaluation reports of individual HEIs were developed by the EA and the initial institutional external evaluation reports of both state universities by EUA. The EA and the IUC published a comprehensive manual which comprised follow-up guidelines on the self-evaluation reports, guidelines for peer-reviewers and institutions, recommendations for further improvement of QA procedures as well as a reflection of the experts engaged in the external evaluation. Participation of students yet appeared to be formal and insufficient. As observed by one of the interviewees, *"These pioneer steps in QA in the country were probably confronted by many deficiencies along the way, but the process had many positive side effects within the HEIs for development of their quality culture – the initial expertise on QA was developed, (an) important data on Macedonian HE was gathered by the HEIs, whereas the university staff started to think about quality seriously."*

3.2. Backsliding stage (2008-2010)

The second, backsliding stage of development came as a result of Government tendency for greater centralization and state control over the HE. As steering mechanisms in HE changed according to societal and political trends (Neave & Van Vught, 1991), it became apparent that the Macedonian right-wing populist Government is not inclined to greater university autonomy, preferring an "interventionary" rather than "facilitatory" role in HE. At

the same time, the universities remained reluctant to be held accountable for the quality of their offerings and their extra budget revenues.

The new LHE (Official Gazette 35/2008) changed the ratio of the Accreditation Board members in favor of the Government. LHE also provided for the principle of the silence of administration to be employed in the accreditation procedure. If the HEI under the accreditation review does not receive the final decision on accreditation within the deadline entitled with the LHE, it could consider that a positive decision has been made and that the accreditation is provided. There is no publicly available data on the provided accreditations (if at all) under this controversy.

The LHE stipulated a Council for Financing of Higher Education as the highest national intermediary body of crucial importance for financing and other key policies in HE, including funding criteria for public and private HEIs, on-going investment policies in HE, student support systems and funding schemes, as well as those related to QA. Although the Council has been established, it did not assume its responsibilities and did not become fully operational.

The power resided in the Government who bypassed the Council, and from a position of strength, took over its role to arbitrarily decide on the individual university funding, on the need for current and/or new study programs and on the establishment and funding of the existing and/or new public universities in the country. The norms and standards for HE activity have been slightly revisited, but it did not bring to better quality, contrary, it only opened room for "sneaking" the government's new projects in HE, dispersed study programs being one of them.

This period was characterized by the rapid growth of HE through the opening of 2 new public universities in Stip and in Ohrid, 10 new state-funded faculties (Faculty of Medicine, Faculty of Veterinary Medicine and Faculty of Law being among them) and over 40 dispersed study programs all over the country, as well as by the increase of the number of private HEIs. Under the rationale of massification of Macedonian HE, the Government has also implemented a controversial *Dispersed studies* project with the ultimate aim *"To increase the number of graduates in the country and bring universities closer to the rural areas"* (National Bologna Stocktaking Report 2009:3). The competition for students, postponement of the country's problem with the youth unemployment, imaginary local development, fulfilling individual ambitions for academic carrier and gaining new voters in targeted local municipalities were seen as main reasons for "dispersion" and "slivering" of the Macedonian higher education by the Government (Popovski 2010:15). Notwithstanding, the state universities were told to open branches in other cities in the country that served as training locations where poor quality offerings were provided in study programs that already existed at their main university campuses — for example, the University Ss.Cyril and Methodius in Skopje (UKIM) offered programs in Tetovo, Kicevo,

Struga, Kavadarci, Veles, Prilep, Kumanovo and Kriva Palanka, while the Universities "Goce Delcev" in Stip (UGD), St. Kliment Ohridski in Bitola (UKLO) and the State University in Tetovo (besides programs in other cities) offer programs in Skopje. Although grounded on the model of a community college to serve to the demands of the local labor markets, these studies neither became important factors of local development in these underdeveloped regions, nor the government has strategically provided the extra funds to meet the necessary preconditions for quality teaching and learning.

A total of 404 students enrolled at the dispersed study programs in 2008/09, 2,039 students in 2009/2010 and 2,652 students in 2010/2011 academic year" (State Audit Office of RM 2012:49). As discussed by one of the interviewees, *"Dispersed study programs were not subject of accreditation [at all], since all of these study programs were already accredited by/at their home HEIs* ". Even if we accept this as a relevant reason for the study programs, it remains unclear how they were opened when they did not meet the minimum norms and standards for HE activity prescribed by the Law. One of the many side-effects of these policies was the existence of 10 Law faculties at one point of time (4 public and 6 private HEIs) which is not reasonable in relation to the size of the population of 2 million. If we agree that HE quality requires a government intervention because of consumer protection, then it is disputable how the government can protect consumers from itself? The same applies to the role of government regulation linked to societal function. If we can again agree that only the good quality HE can produce knowledgeable and skillful graduates that contribute to the Macedonian economy, then what societal function the Macedonian Government is fulfilling with the establishment of so many new universities, faculties and dispersed study programs of questionable quality?!? Will it safeguard the quality of HE or will it safeguard the lower percentage of unemployed high school graduates?

3.3. Status Quo Stage (2010 – 2011)

National university ranking was the novelty in the third development phase introduced with the new law amendments (Official Gazette 115/2010). The first ranking commissioned by the Ministry and undertaken by Shangai's Jiao Tong University ranked a total of 19 (public and private) universities based on the set of "19 indictors of academic performance and competitiveness, covering major mission aspects of HEIs such as teaching, research and social service" (ARU, 2012). Four out of five state universities were ranked in the first five. The biggest private university FON (Faculty of Social Sciences) accused the Ministry for political interference in the commencement of the rank list. Six months later, the article *"Wrong data for Shangai ranking"* (daily newspaper "Dnevnik" 04.08.2012) examined the

statements of the HE Sector of the Ministry that *"almost all private universities submitted inconsistent information, which was not the case with the state [universities]".* This article also pointed out that for several areas like number of graduates, research investments, scientific citations, Matura score of the enrolled students, etc. *"part of the Macedonian universities have submitted illogical, i.e. wrong numbers during the National Shangai ranking"*. In the situation of drastically changing HE landscape with increased and diversified HE providers and ambiguous and underdeveloped QA systems in the country, these conflicting actions and statements put in question the real need for, as well as the purpose and the real contribution of the university ranking to the quality of Macedonian HE. The opinion over the ranking seems to be divided and varies from the observation that *"It's too early for that, we are not ready for the university ranking now"* through the opinion that *"the university ranking provides for partial or non-objective picture for the quality of HEIs under review"* and *"the ranking state the obvious and doesn't tell anything that we already don't know"* to the statement that *"it encourages healthy competition among HEIs and contributes to better quality".*

New law amendments (Official Gazette 17/2011) provided for the merger of the Accreditation Board and the Evaluation Agency into Higher Education Accreditation and Evaluation Board (HEAEB) that in October 2011 became an affiliate ENQA member. Nonetheless, the lack of legal entity status and operational independence, ineffective and/or no internal policies, scarce state resources and lack of well-trained core support staff impede HEAEB to assume all its responsibilities set by the LHE. These issues are serious concerns for its capacity and future institutional building and development, in line the standards and guidelines for QA in the EHEA.

Last but not least, this stage is characterized by the introduction of high sum penalty provisions for different law violations related to QA. For example, LHE provides a 4,000 EUR fine for the HEI if it doesn't conduct any self-evaluation as envisioned with the LHE, an additional 1,000-1,500 EUR for the responsible person if the self-evaluation results are not published on the web site and 1,000-1,500 EUR if the HEI doesn't submit to and inform the Ministry of education on the self-evaluation results. 4,000 EUR is to be paid "if the name of Higher education institutions is used without being established as HEI under the law"; 5,000-7,000 EUR if a study program is applied without accreditation. The extreme example is a fine in the amount of 100,000 EUR for the HEI/Research Institute "if it obstructs the work, refuses to provide and/or doesn't provide all data required to the institution which conducts the university ranking".

3.4. Captured Higher Education in a Captured State (2011 - 2017)

The overregulation of HE and increasingly state-challenged university autonomy were the main features of this development phase. Frequent and excessive legislation changes (five times only in 2015 - Official Gazette 10/2015, 20/2015, 98/2015, 145/2015, 154/2015 and 21 times since the adoption of the Law on HE in 2008), imposed new requirements to the universities. The announced objectives were to improve the quality, relevance and internationalization of the study programs imposing a requirement for at least two joint degree programs per institution, compliance of the study programs with those from European and /or other top-ranked world universities, prescribing the ratio of compulsory and elective subjects, etc. The recruitment, progression and professional development of the academic staff were linked to the number of publications with impact factors, the requirement for teaching and study visit at foreign universities, involvement in research projects etc. The biggest part of these requirements was stipulated for funding from universities' budget revenues. Some observers looked at the changes as an attempt of the Government to increase the control and "to discipline" the university, keeping them "on a short leash", other as requirements that could advance the quality of teaching and learning and boost accountability on how the university spent the money from their revenues. In the context of chronically underfunded HE, such ambitious requirements to the universities may be found paradoxical. For example, who will be teaching in the English language at the new Joint degree programs? How can the university recruit new and/or improve the quality of the existing teaching staff if the university is not able to execute autonomously any aspect of its human resource strategy without prior consent and funds approval of the Ministry of Finance, Ministry for Information Society and Public Administration and Ministry of Education?!?

The European Commission in its progress report for Macedonia noted that democracy and the rule of law had been constantly challenged in the country, raising *"concerns about state capture affecting the functioning of democratic institutions and key areas of society"* (EC, 2016:8). Transparency International defines a "captured state" as *"a situation where powerful individuals, institutions, companies or groups within or outside a country use corruption to influence a nation's policies, legal environment and economy to benefit their own private interests"* (Transparency International 2019). Many observers from the academic community see the university as one of the affected institutions and the higher education as one of the sectors in society (along with the public administration, judiciary, business etc.) that slowly but surely, have been captured by the political elites in power. The appointments of the university professors that were the most prominent members, advocates and supporters of the ruling party ideology and its policies to serve as president(s) and members of the Higher Education Accreditation and Evaluation Board

were seen as "loyalty awards" and clear signs of strong political influence over the accreditation processes. Others recognize the political control over the election of university management structures, the enrolment and progression in the academic profession as well as the silence from the biggest part of the academic staff over the ambiguous education reforms and controversial government projects (new faculties, universities and dispersed study programs with questionable quality) as elements of a "captured university". This new phenomenon deserves additional research attention and in-depth analysis.

With the explanation that "buying diplomas must stop" and that quality of HE must be improved, the controversies reach its peak when the new amendments to the Law on HE (Official Gazette no. 10/2015) were adopted. The amendments provided for another change in the number, structure, criteria and way of appointment and dismissal of the HEAEB members, this time by the Assembly of RM. They also provided for a high salary in the amount of seven and half average net Macedonian salaries for domestic HEAEB members and 15 net salaries for professors from abroad „who will professionally do the function". Many observe this move as an ambitious attempt for HEAEB professionalization. The amendments also instated an eliminatory "state exam" as a new, external assessment measure for students which they should have taken at the end of the second academic year and before graduation. The announcement of this mandatory pre-graduation exam that should have been implemented centrally by HEAEB sparked massive student protests led by the Students Plenum (*Studentski Plenum*) and latterly supported by the Professors Plenum *(Profesorski Plenum).* Holding up banners reading "We occupy in order to liberate", the students had 15 days of "occupation" of 4 faculties of the university in Skopje, proclaimed them "autonomous zones" and held alternative lectures, concerts and other events. The students protest the government plans that encroached academic freedoms and autonomy, protest the politicization and corruption of the Student Parliament representatives and fight for quality education and student rights. Being the biggest public protest that the country had seen, it succeeded to overcome the interethnic Macedonian-Albanian divides and had paved the way for arising broader anti-government protests later when the opposition released transcripts of wiretaps ordered by the government. The students won, and the enforcement of the new law on HE was postponed for two years. Yet, the Government was not discouraged in the middle of the deepest political crisis in the country to pass laws on establishing 2 new state-funded universities (the University Mother Teresa" and the University "Damjan Gruev"). The later remained unimplemented only due to government change.

3.5. Period of new opportunities and high expectations (2017-to date)

In May 2017, a new coalition Government led by Social Democrats got in power, asserting a new chance for Macedonia to get back on EU track and committing "to free" the state captured institutions. A new comprehensive Strategy for Education 2018-2025 (MoES, 2018) was adopted aimed at strengthening of university autonomy and improving the quality of education.

Although the new Law on HE (Official Gazette 82/2018) was developed in the highly consultative process, it is seen as a "collection of compromises" made with all stakeholders (Professors and Students Plena, Independent Academic Syndicate etc.) intended to decrease the tensions and relax the atmosphere in the academia. The law opened the window for independent QA Agency consisted of two separate QA bodies (Accreditation Board and Evaluation Board) and provided for the establishment of National Council for Higher Education and Research. However, it did not provide for a functional organizational structure that will ensure operational independence and efficiency of the Agency, neither succeeded to draw the needed policy attention on the establishment of effective internal structure, policies and practices of QA at HEIs as cornerstones of internal quality processes and development of quality culture. Contrary to high expectations, the country is lagging behind the law implementation, while the education authorities and the academic community lacks professional debate for profound higher education changes.

4. What are the Perspectives of Macedonian Higher Education Quality Assurance and how to move forward?

The existing research findings from four state universities (see Pecakovska, 2015 for details) showed partial compliance of the QA related policies and practices with all seven ENQA ESG standards (ESG 2005) on internal quality assurance, as well as the incompliance with two and partial compliance with six out of eight ESGs on external QA. The findings also showed incompliance with 3 and partial compliance at 5 out of 8 ENQA standards on QA of the Higher Education Accreditation and Evaluation Board (HEAEB).

The matrix given below summarizes the level of compliance with the first version of ESG 2005 against the four descriptors that have been used by the ENQA review panels in their final reports on the compliance of the Agencies with ENQA membership criterion / ESG standards: full compliant, substantial compliant, partially compliant or no compliant.

Notwithstanding, the situation has not been changed much, and the findings remain equally relevant to date.

The findings related to internal quality suggested excessive bureaucracy and time-consuming procedures that lack mechanisms for internal approval, monitoring and periodic review of study programs and qualifications. The students are insufficiently involved in QA processes, particularly not consulted for the content of the program and curriculum design, whereas the universities very little or insufficiently take into consideration the opinion of students for improving the conditions of student services and their opinion on the performance of the teaching staff sought through students' surveys. Over half of the respondents agree that the students are assessed by publicly announced criteria opinion is sought through students' surveys on the performance of the teaching staff. The self-evaluation is applied in a very legalistic manner and not as an essential I instrument to achieve better quality, while the universities have not gone far beyond formal and obligatory responses to the requirements of external quality assurance.

Table 1.1. : Matrix of compliance with ENQA european standards and guidelines for quality assurance (ESG 2005)

Standard	**Conclusion**
Part 1. European Standards for the Internal QA of Higher Education Institutions	
ESG 1. 1. Policy and procedures for quality assurance	Partially compliant
ESG 1.2. Approval, monitoring and periodic review of programs and awards	Partially compliant
ESG 1.3. Assessment of students	Partially compliant
ESG 1.4. Quality assurance of teaching staff	Partially compliant
ESG 1.5. Learning resources and student support	Partially compliant
ESG 1.6. Information systems	Partially compliant
ESG 1.7. Public information	Partially compliant
Part 2: European Standards for the External QA of Higher Education	
ESG 2.1. Use of internal quality assurance procedures	Partially compliant
ESG 2.2. Development of external quality assurance processes	Partially compliant
ESG 2.3. Criteria for decisions	Partially compliant
ESG 2.4. Processes fit for purpose	Partially compliant
ESG 2.5. Reporting	Partially compliant
ESG 2.6. Follow-up procedures	Partially compliant
ESG 2.7. Periodic reviews	Non-compliant
ESG 2.8. System-wide analyses	Non-compliant
Part 3: European Standards for Quality Assurance Agencies	
ESG 3.1. Use of External QA Procedures for HE	Partially compliant
ESG 3.2. Official status	Non-compliant
ESG 3.3. Activities	Partially compliant

Standard	Conclusion
ESG 3.4. Resources	Partially compliant
ESG 3.5. Mission statement	Partially compliant
ESG 3.6. Independence	Partially compliant
ESG 3.7. External QA Criteria and Processes used by the Agencies	Non-compliant
ESG 3.8. Accountability procedures	Non-compliant

Source: Adapted from Pecakovska, 2015

These findings and the above developments suggest that Macedonian HE is far away from having an efficient system of QA. What are the possible ways out?

- **Rethinking the Macedonian QA system in line with country strategy priorities on HE and ENQA standards and guidelines on QA.** In line with the country long term strategic priorities for higher education, a national consensus should be achieved on why and what type of QA system do we need. An extensive professional discussion is needed on the real purpose of QA by including all stakeholders and by encouraging the academia to walk from a reactive to a proactive stance. The current national accreditation and evaluation guidelines and procedures need to be adjusted and revised in conformity with the European Standards and Guidelines on QA developed by ENQA (ENQA, 2015). Attention should be paid on international cooperation, demonstration of consistency and rigor in external evaluation and accreditation particularly for study programs on regulated professions (including the compliance with EU directives 2013), investment in development of teaching and research competences of the academic staff, further development of National Qualification framework, improvement of data information systems etc.
- **External evaluation of all universities by ENQA accredited and EQAR registered QA agency:** The curse of a small country like Macedonia where people knows each other brings lack of objective judgement in accreditation, re-accreditation and evaluation of HEIs providers. The new Government should therefore seriously consider commencing an ad-hock external evaluation of all accredited universities and HEIs (both public and private) under equal conditions by the independent ENQA accredited, and ENQAR registered QA agency. This will ensure credible and unbiased assessment on what is really going on at our HEIs. It will provide trustworthy baseline data on HE and evidence for improved quality regulations and informed decisions on optimization of the existing diverse network of institutions, study programs and profiles. This will be beneficial to all stakeholders and on a long run will have many positive effects in the society, preventing degree meals and protecting

students and their parents. It may also urge shutting down of underperforming programs and institutions and may initiate positive change at other, encouraging revision of degrees and study programs.

- **Supporting Macedonian HEIs for the introduction of efficient internal system for quality assurance.** Since "the primary responsibility for quality assurance lies within the HEIs" (European Ministries, Berlin, 2003), it is of utmost importance for the country to invest in introduction of efficient internal QA system aimed at continuous improvement of HEIs. QA should be perceived as an integral part of everyday activities and the long term strategic plans of the universities, and it is therefore important the managerial university structures to understand and support it. The HEIs need to ensure regular review of the content of study programs, pedagogical approaches, the workload and assessment of students, quality and effectiveness of the teaching staff, public information, learning resources and supporting systems for students. Participation of students in quality assurance processes needs further improvement. The integration of the learning outcomes and their use into teaching, learning and assessment of students should become part of the compulsory training of the university teaching staff. Human resource policies of the universities/HEIs should be developed, enacted autonomously and accompanied by proper financial support by the state. An electronic database for the university teaching staff will help gather necessary data for HE policies and ease the process of professional development.
- **Ensuring the necessitate preconditions for HEAEB operational independence and efficiency:** The state must ensure that all preconditions for making the QA Agency independent and fully operational are in place. The Agency should develop the necessary internal policies and accountability procedures in line with the ENQA ESG for QA agencies. A new organizational structure consisted of a Managing Board, the Appeals committee, ERIC-NARIC Center, law department, HE analytics etc. could be workable with the determined number of positions and staff competences required for better efficiency. The Agency should receive the necessary funding for systemic training of its members in accreditation and especially in external evaluation. The staff and the evaluators should be given permanent re-training. Further efforts are needed in equipping the Agency with the necessary technical equipment and electronic data supporting system. It should take over the responsibility to manage the funds from its own revenues account. It is critically for the Agency to get involved in its self-evaluation, which will help the administrative staff and members to reflect on its work.
- **Pausing the national university ranking:** The current indicators have many methodological, technical and data accuracy limitations which brought illogical

outcomes in the ranking of universities, while the three subsequent national rankings did not bring any surprises in the top 5 ranked universities. This puts in question the purpose and the real needs for ranking. In the absence of an efficient (internal and external) system of QA, the national university ranking performed "by an independent provider preferably from abroad", should be looked into very carefully. Since the ranking does not contribute to the enhancement, but only to the accountability function of quality assurance, it should not be seen as a quality assurance tool (Costes et al., 2011). European University Association in its external evaluation report for the Univerisity Goce Delcev in Shtip (EUA 2014:18) concludes that *"Shanghai rankings seemed to attract national interest and was mentioned several times in discussions with the team. The team believes that such rankings do not add to the meaningful development of universities and supplemental indicators should be used".*

- **Fostering cooperation on quality assurance:** Reliance exclusively on domestic reviewers can compromise the impartiality of judgment in the process of accreditation and external evaluation. It may foster collegial solidarity or emerges quasi-competition among the HEIs. The involvement of external reviewers outside Macedonia will require of the HEIs to conduct the self-evaluations and reviews in English, which includes additional translation costs. HEIs should consider accepting this extra burden as a step towards increased credibility of the interview panels and the external evaluation process. Networking and cooperation with the experts from the Balkan region might be a viable option because of the language similarities.

5. Concluding Remarks

If quality assurance policy aims to solve a perceived problem in higher education, (Westerheijden at al: 2014), than how QA could restore the trust of citizens and society in Macedonian higher education and its institutions? Due to longstanding grievances, rethinking and rebuilding the quality assurance system will be an extremely tough task to do. We should not forget, however that Macedonia has a shallow starting position, compared with the other SEEU countries, experiencing interethnic tensions, arm conflict in 2001, severe economic hardship through the years of transition and serious political turmoil caused by the wiretapping scandal and widespread corruption and most recently, change of the name of the country.

After a decade of hazardous policies in higher education, it is time for the Government and the academia to overcome their conflicting interests, to agree on common national objectives on quality assurance and finally undertake meaningful changes, addressing many sensitive questions along the way. How can government officials be held accountable for protecting the public interest through quality assurance in the new political and social reality? How to ensure the independence of the new QA Agency from the political parties' influence? What policies can be pursued to increase the tertiary education attainment while safeguarding the quality? What function the Macedonian universities play in our society and how they can win the academic struggles for greater academic freedom, integrity and more significant academic reputation in Europe? Probably the first step in pursuing the answers and prevent further damage is to stop experimentations and improvisations in higher education.

References

Academic Ranking of World Universities (2012) Macedonian HEIs Ranking, released in February, 2012, available at: http://www.shanghairanking.com/Macedonian_HEIs_Ranking/index.html

Berlin Communiqué (2003) http://www.bologna-berlin2003.de/en/aktuell/haupt.htm

Costes, N., Hopbach, A., Kekäläinen, H., van Ijperen, R. & Walsh, P., 2011, Quality Assurance and Transparency Tools. European Association for Quality Assurance in Higher Education (ENQA), workshop report no 15. Available at: http://www.enqa.eu/indirme/papers-and-reports/workshop-and-seminar/QA%20and%20Transparency%20-%20Final.pdf (accessed 20 January 2019).

European Commission (2016). Commission Staff Working Document – The Former Yugoslav Republic of Macedonia 2016 Report accompanying the document 'Communication on EU Enlargement Policy'. (EC: Brussels):.8. Available at: https://ec.europa.eu/neighbourhoodenlargement/sites/near/files/pdf/key_documents/2016/20161109_report_the_former_yugoslav_republic_of_macedonia.pdf

ENQA (2005) Standards and Guidelines for Quality Assurance in the European Higher Education Area, DG Education and Culture, Helsinki.

ENQA (2015) Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). (2015). Brussels, Belgium. Available at: https://enqa.eu/wp-content/uploads/2015/11/ESG_2015.pdf

EUA Institutional Evaluation Program (2014) Institutional Evaluation of the Goce Delcev University, Report of the EUA expert team, July 2014: EUA: 18. http://www.ugd.edu.mk/documents/ugd/evaluacija/UGD_IEP_report_ENG.pdf

European Union Labour Force Survey – Annual results Issue number 27/2008

EUROSTAT database available at: https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=t2020_41&plugin=1

Law on Higher education (Official Gazette 64/2000; 35/2008; 103/2008; 26/2009; 83/2009; 99/2009; 115/2010; 17/2011; 51/2011; 123/2012; 15/2013; 24/2013; 41/2014; 116/2014; 130/2014; 10/2015; 20/2015; 98/2015; 145/2015, 154/2015 и 82/2018)

Ministry of Education and Science of Republic of Macedonia. Education Strategy for 2018-2025 and Action Plan, 2018 p.12

National Bologna Stocktaking Report, 2009:3

Neave, G., & Van Vught, F. (1991). Prometheus unbound. Oxford, Eng.: Pergamon Press.

Wrong data on Shangai Ranking (2012) daily newspaper "Dnevnik" from August 4th, 2012

Pecakovska S. and Lazarevska S. (2009) Long Way to Knowledge Based Society p.40 FOSIM 2009

Pecakovska S. (2015) Creation of a Concept for Quality Assurance in Macedonian Higher Education – compliance with the ENQA 2005 European Standards and Guidelines for QA (unpublished PhD dissertation, 2015)

Popovski Z. (2010) The Quality of Higher education under question: Dispersion as Macedonian phenomena, FOSM, 2010

State Statistical Office. Statistical Yearbook 2017/8 Skopje,

State Statistical Office. Research and development, 2017

State Statistical Office. Teachers and supporting staff in the tertiary education institutions in the academic year 2017/2018 available at: http://www.stat.gov.mk/pdf/2018/2.1.18.11.pdf

State Audit Office of the Republic of Macedonia Audit Findings, available at: http://www.dzr.mk/Uploads/71_RU_Finansiranje_Visko_obrazovanie_Ravizorski_naodi.pdf Accessed on November 16th, 2012 p.49

Transparency International, Definition on state capture, Anticorruption Glossary, Available at: https://www.transparency.org/glossary/term/state_capture (accessed 20 January 2019).

Westerheijden, D.F., Stensaker, B., Rosa, M.J. & Corbett, A., 2014, 'Next generations, catwalks, random walks and arms races: conceptualizing the development of quality assurance schemes', European Journal of Education, 49(3): 421–434.

Van Vught, F.A. and D.F. Westerheijden (1994) Towards a General Model of Quality Assessment in Higher Education. Higher Education 28(3): 355–371.

Further readings

Bergen Communiqué (2005) http://www.bologna-bergen2005.no/Docs/00-Main_doc/050520_Bergen_Communique.pdf

Cepujnoska V. Baumgartl. Donevski B. and Fried J. (2004) *Quality assurance in higher education: From analysis to improvement,* Interuniversity conference of RM, May, 2004

EC (2005) *European Higher Education Area – Achieving the Goals* Conference of European Higher Education Ministers: Contribution of the European Commission, Bergen, 19/20 May 2005

ENQA (2013) *Guidelines for external reviews of quality assurance agencies in the European Higher Education Area*, available at: http://www.enqa.eu/wpcontent/uploads/2013/06/Guidelines-for-external-reviews-of-quality-assurance-agencies-in-the-EHEA.pdf

Hazelkorn, E. (2009) *The emperor has no clothes? Rankings and the shift from quality assurance to world-class excellence*. Trends in Quality Assurance: EUA

Neave, G. (1994) (ed.). *Government and Higher Education Relationships Across Three Continents: The Winds of Change* (Issues in Higher Education) IAU Press. PERGAMON.

Neave, G. (1998). *The Evaluative State Reconsidered.* European Journal of Education, 33 (3): 265 - 284.

Rulebook on the organization, the work, decision making, methodology and standards for accreditation and evaluation and other issues related to the work of the Higher Education Accreditation and Evaluation Board (Official Gazette no.151/2012);

Rulebook on the organization, the work, decision making, methodology and accreditation procedures of the Accreditation Board (Official Gazette no.121/09);

Salmi J (2015) *The Evolving role of the state in Regulating and Conducting Quality Assurance*

State Statistical Office. *Statistical Yearbook 2011/12*, Skopje, 2012

Guidelines for assessment and assurance of quality of HEIs and academic faculty (2000) (Official Gazette no.64/2000);

Regulation on norms and standards for establishing HEIs and providing higher education (Official Gazette no.103/2010);

Usher, A. & Savino, M. (2006) *A world of difference: A global survey of University League Tables.* Toronto, ON: Educational Policy Institute

World Bank (2004) *Tertiary Education and Innovation Systems in Macedonia Report,* June, 2004

World Bank (2013). Project Assessment Document for the Skills Development and Innovation Support Project. Washington DC: The World Bank, Report No: 80582-MK.

Woodhouse, D. and Stella, A. (2006) *The need for accreditation*
Woodhouse, D. (1999) '*Quality and quality assurance: an overview*', in De Wit, H. & Knight, J. (Eds.) Quality and internationalization in higher education (Paris, OECD).
Van Raan A. (2005) *Fatal attraction: Conceptual and methodologigical problems in the ranking of universities by bibliometric methods* Scienometrics, 62:133-143

Church Contributions to the Transformation of Higher Education in Central and Eastern Europe

Gabriella PUSZTAI, Enikő MAIOR, Zsuzsanna DEMETER-KARÁSZI

Abstract

Our study deals with a specific system, which was a result produced by the privatization of higher education. In the less developed regions, the existing capacity was not able to fulfil the growing number of students, and that is why the involvement of private stakeholders has a significant role. In the following study, we would like to concentrate on church-related higher education institutions.

After three decades of the transformation process in post-communist countries, the contributions of the churches to the new higher education system and policies proved to be crucial. First of all, they had new visions on higher education influenced earlier by party-ideology. Secondly, they reached social-cultural groups that were not preferred by former party-policy. They put higher education closer to regions and territories considered not important by the former regimes (deprived territories with ethnic and national minorities, as well as religious minorities and minority denominations). With these inputs, churches and denominations become the important actors of the higher education policies as well as the transformation process in the countries of Central and Eastern Europe.

According to the institutional typology of Hrubos's and her co-workers (2012) our approach was that one could draw the consequences from the institutional mission by analysing the initiations of training programmes. In our study in addition to the Central European review, we have analysed the public database of Hungarian Accreditation Committee to get an answer, from a unique point of view to the initiations of Hungarian training programs of church-related higher education institutions.

1. Introduction

The past half-century has seen significant changes in European higher education institutions. There is a difference between the development of foremost industrialized countries and former socialist countries; however, in addition to these two separate groups, we must take account of the specific features of each country (Kozma et al., 2017). The change in the development of the higher education university sector lies in the growing number of universities, founding new universities, etc.

In Europe, the higher education researches do not deal thoroughly with this sector. After the political changes, one research attempt to make an international comparison (Pusztai, 2010). Then five Central and Eastern European countries were involved and were asked about the role of the maintainers in church-related higher education institutions. The result was presented in a case study. The authors determined that a significant number of church-related higher education institutions were established in regions with lack of institutions, except those who belong to a church or a religious organisation, and they tried to compete with more prominent public institutions. The church-related institutions, in the above-mentioned regions, have launched training which suits to social expectations: social assistance, social worker etc. (Pusztai, Farkas, 2016). In the last decades, the significant transformation was made, and the following study tries to base these changes.

The changes indicate different trends of development across countries. In the next chapters we would like to highlight the significant changes that occurred in the church-related higher education system, and we also would like to sum up the questions governed by this part of the higher education system in Hungary and the cross-border areas.

2. Transformations in higher education

To examine the current situation of the higher education system, we must know how the transformation affected the higher educational system in Hungary and the cross-border areas.

Before the transformation, the socialist model dominated in this regions' higher education. (Kozma, 2008; Pusztai, Farkas, 2016). "State interest was before academic or market aspect. When the promotion of faculty was adjudged, the scientific achievement was affected by political reliability. Student or labor market demands did not influence higher education limits. During the last decades of the socialist area, students from the new elite families were admitted to the limited number of higher educational posts. Besides,

based on political, ideological aspects, quotas were set up to admit students from the working class and other state-preferred groups" (Hrubos, 2002; Pusztai, Farkas, 2016).

The transformation meant a significant change in the case of church-related higher education institutions. In Hungary and also in the cross-border areas law provided religious freedom and the churches regained their institutional funding rights.

In Hungary, the regime change of the 1990s brought forth a great new era, since the changed roles made it possible for authorities, other than the state, to establish institutions (Pusztai, Farkas, 2016). In the first two decades following the regime change, the most crucial education policy debates were on how to establish church universities, what kind of economic and quality control, the state can exercise over them, etc. Following the political changes of 1989/90, education opened up to societal needs, an expansion took place, and not only the number of those enrolled in higher education grew, but also the number of institutions. The role of church institutions was to enable the capacity required by training needs, as soon as possible.

In Romania, territory directly bordering Hungary, the similar transformation occurred in higher education after 1989. From that point, we can speak about the depoliticization of education and the rejection of the centralized system. According to the educational law, private higher education institutions appeared after 1989 and the church-related higher education institutions were part of the private educational sector of the country (Szolár 2010, Law of Education from 2011 Nr. 222).

The transformation in Polish higher education was also fundamental after 1989. On the one hand, there occurred a dynamic growth in participation rates, numbers of students as well as faculty and institutions. On the other hand, also qualitative changes started and went on, such as regained institutional autonomy and academic freedom, shared governance, emergent public-private duality, new competitive research funding regimes and fee regimes (Kwiek, 2014).

In Czechoslovakia, almost the same political changes occurred in 1989. In the region the social life was under strict control; church-related higher education institutions were not available at that time. Continuity of church-run education in the Czech Republic was broken during the communist rule. The denominational structure, church attendance, religious commitment and the quality belief bear the signs of ideological repression (Rozanska, 2010). In Slovakia four-fifths of the Slovak population declared their affiliation with religion and Registered Churches and Religious Communities have the right to propose the establishments and maintain higher education (Prochazka 2010).

Overall, we could tell that the rigorous supervision of the communist regime had a significant impact on the church-related higher education institutions in all countries increases and decreases in his level. The 1990s socio-political changes were determinant

in the life of religious institutions and without mentioning them, one cannot study appropriately and briefly their situation in nowadays.

3. Situational pictures then and now

Investigating the role of the churches in higher education in this region, we reveal the main question, which can be answered in a large-scale research project. Firstly, if the maintaining and the financing of the observed institution is different, why can we call them church-related institutions? Who controls the new institutions? Whose requirements determine dominantly working of the church-related higher education institutions? Secondly, has these institutions distinct social function for the several stakeholders? Are their students from special social groups? On the third hand, in the above-mentioned circumstances how do they recruit staff and administration? All in all, what does church-related higher education in the region mean? In our study, we would like to emphasize and inspect, that the function of the church-related higher education can be interpreted in the specific higher education system, namely that the answer originates from the actual social context and background.

During the political transition process, two fundamental issues of education-related legislation had to be settled in post-socialist countries. One of them was granting the right to ecclesiastical legal persons to establish and maintain higher education institutions. The other one was whether training courses for church professions, e.g. theological faculty, would be allowed in state-maintained institutions of higher education. Hungary chose to grant churches the right to operate autonomous higher education institutions; thus theological faculties are missing from state universities. Currently, there are 5 church universities and 21 church colleges. Education in church higher education institutions is funded by the state, which also contributes to the operation of the institutions. There is a law which provides for the same funding of church and state higher education institutions [CCIV/2011. 84. § (3)].

In neighbouring post-socialist countries, theological faculties are part of state universities, and if there are church institutions in the country, they have a radically different mission, not focusing solely on theological education. Similarly, to the Hungarian higher education institutions network the church higher education network is uneven, it is highly concentrated, as all the church-run universities, except one, are located in Budapest, and a significant number of the colleges are in the capital or the central region. Unlike state institutions, these institutions do not have extensions; consequently, youth from the central region have more chances to enrol. The presence of church higher education institutions in certain regions is not accounted for by the religiosity of the youth living there (Pusztai, Morvai, Inántsy, 2015).

Previous studies based on entrance examination data have not founda significant correlation between the entity that runs the higher education institution and the disadvantaged situation (Pusztai, Morvai, Inántsy, 2015). Students enrolled in church pedagogical training have reached a significantly higher score. The proportion of non-Hungarian citizens in the church pedagogical training is double compared to those in the state sector.

The training structure also reveals a social mission. Besides humanities and teacher training, other dominating fields are legal training and of course, theological training. The majority of church higher education institutions offer teacher training and master of art programs in pedagogy; however, students can also opt for kindergarten or elementary school teacher training.

In Romania, the church-related higher education institutions belong to the private category of higher education. With regard to the establishment can be individual person, individual group, foundations, associations or religious communities. The 222. phrase of the education law stated that, the state supports the church-related higher education institutions and the theological faculties, in that case, whether in the public higher education institution does not have equivalent faculty, furthermore the same law states that the state has the opportunity to decide whether to support or not the church-related higher education institutions (Szolár, 2010).

In addition, we can classify church-related higher education institutions in Romania into three types: the first type is the theological faculties, which are units of public universities financed by the state; the second type is the theological institutes and divinity schools, which are private institutions financed by the church and between the walls theological education of priest, teachers and social workers proceed; and the third type is the church-related universities, there are only two in Romania: the Partium Christian University and the Emmanuel University. Both have private status, and their foundation comes from the church and non-Romanian public sources (Szolár, 2010).

“Practically, from the very beginning of higher education in Poland – with the foundation of the Jagiellonian Academy – the Church has been present at higher education institutions and played a vital role there” (Nowak, 2010). In Poland, the churches and religious organizations also have the right to establish higher education institutions and the state, and the local governance supports them (Zielińska et al., 2013).

As mentioned before in the case of the Czech Republic the situation of the church-related institutions was not easy considering only that almost 59% of the population does not belong to any denomination (Rozanska, 2010), not to mention the political and social changes. “There are no religious private (Church-owned) schools at the university level in the Czech Republic” (Rozanska, 2010). There are theological faculties at a secular, public higher education institution, but church-related higher education institutions appear just at

the college level, and there are denomination higher education institutions (Rozanska, 2010).

In the third decade following the regime change, the consolidated church institutions increasingly became special participants in the competitive field of higher education. The main reason behind the "competition" between higher education institutions was demography. As regards the number of students, in contrast to the higher education expansion of the '90s (Pusztai, Finánczc, 2003; Kozma, 2005; Polónyi, 2014), since 2015 there has been a decreasing trend. Competition is present not only between institutions maintained by different entities but also between institutions maintained by the same entity.

In terms of their identity church institutions are not homogeneous; institutions offering religious training have a marked religious character, however, in order to recruit students the majority of institutions offering secular training are reluctant to take on a religious character, although this would communicate a stronger message about the identity of the institution. Whether church universities will be able to compete with state universities for elite positions (ranking, internationalization, foreign academics, self-funded training) or whether they will adopt their own religious mission and identity based on views of the world, society and man, is yet to be determined.

4. Case study on training development strategy in Hungarian Church-related higher education institutions

We tried to estimate the answer of Hungarian church-related higher education institutions to the competitive situation by analyzing their strategies in launching courses. We collected data from the database of the Hungarian Accreditation Committee from 2005 to 2019. While analyzing the data, we wanted to answer the following question: how and which direction did the institutions developed their training provisions?

The 21 church-related higher education institutions had 230 detailed training plans in order to start new training programs. Almost half of the petitions targeted bachelor (108), 94 targeted masters, 23 targeted undivided masters and only 6 targeted vocational higher education training. It is therefore concluded that the institutions work in the Bologna two-cycle degree structure.

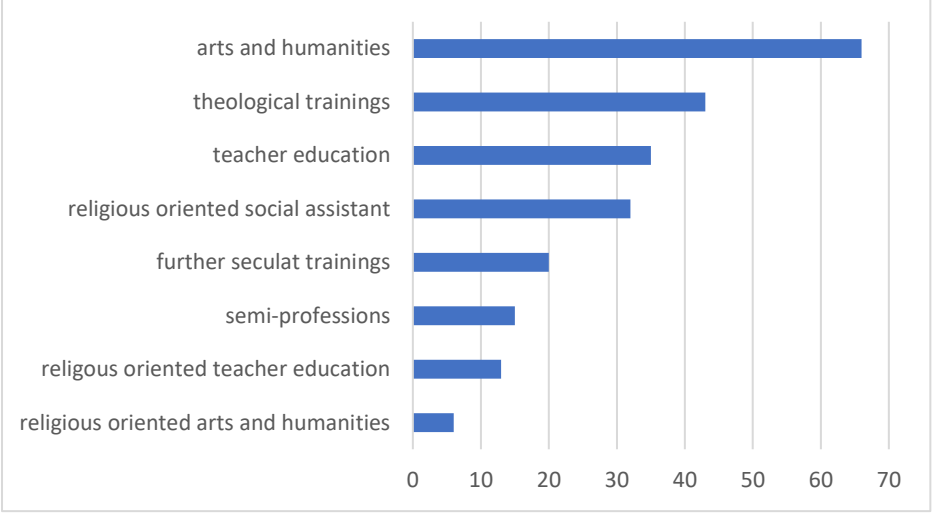
The analysis was made by using open coding of the training. Two independent encoders realized the coding. The training launched by the church-related higher education institutions can be divided into three groups. The first group consist of those training which are from the field of classical theology. The second group is composed of training which are traditional secular training, and which can also be found in public higher education institutions in the same form, and last but not least the third group embodies the

training where the religious identity is mixed with secular training. In our study, we analyze the newly submitted petitions, and we do not deal with the law or sciences training which stability is unquestionable on more prominent institutions.

Considering all this, the coded types are the following: (1) theological trainings/courses; (2) semi-professions (secular social assistant/helper); (3) teacher education trainings; (4) (further) arts and humanities; (5) religious/theological oriented social assistant; (6) religious/theological oriented arts and humanities; (7) religious/theological oriented teacher education; (8) further secular trainings. In addition to this, four petitions were on foreign language trainings.

Among the trainings the most popular, about every four, are trainings on arts and humanities, the second in popularity is the classical theological trainings and after that the teacher education. A significant proportion of the trainings wants to prepare the students for such a work which directly services religious communities, which means a conscious construction from the church-related higher education institutions.

Figure 1 The number and the type of the training plans initiated by the church-related higher education institutions between 2005 and 2019



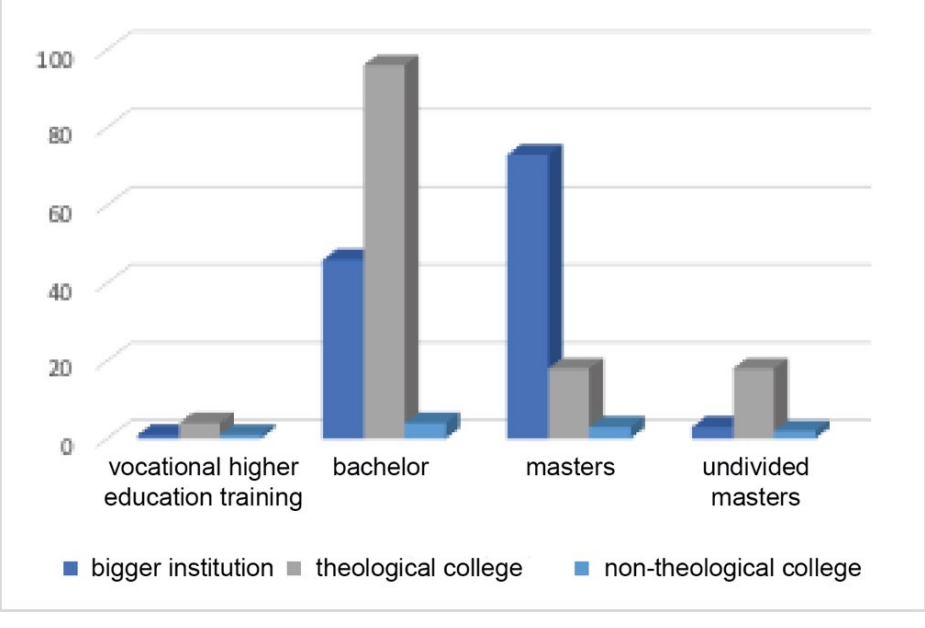
The church-related higher education institutions basically can be divided into three categories (1) more prominent institutions with many faculties; (2) fundamentally theological institutions; (3) functioning with non-theological purposes, which does not

permit the establishment of independent faculties. The first category consists of 2, the second 18 and the third consist of 1 institution.

We have analyzed what kind of trainings initiated to establish on this basis and what kind of mission, the strategy can be identified in the different categories. While we were investigating on the level of the trainings the differences have become evident. The fundamentally theological institutions want to establish mainly bachelor courses, whereas the more prominent institutions with many faculties want to establish master courses, which shows that under a subsystem, the division of labour is present. The initiations of the undivided masters and the vocational higher education trainings are at a modest level characterized by the fundamentally theological institutions.

Regardless of whether these initiatives have succeeded or not, have got the accreditation or not, it can be demonstrated that the church-related institutions want to expand their bachelor and master levels of their trainings offer.

Figure 2 The distributions by educational level among the different types of church-related higher education institutions



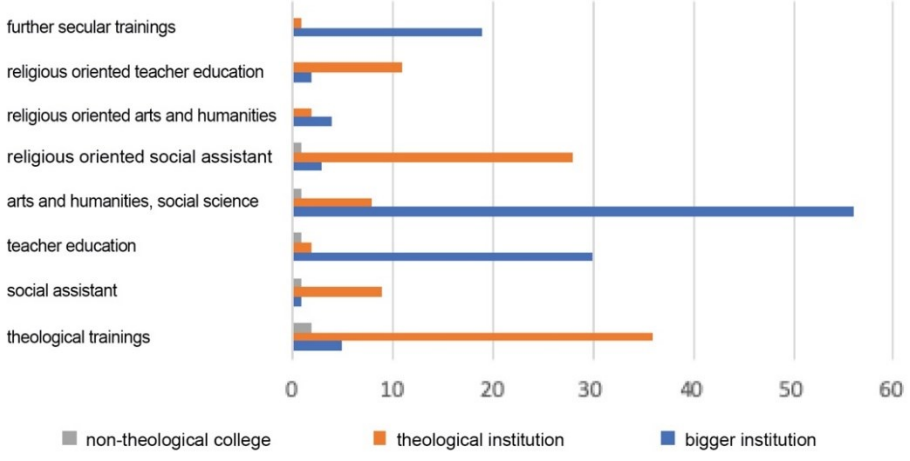
When we analyzed the contents of the trainings we have focused on the following question: to what kind of career does the training prepare according to the sectoral nature of work and to the knowledge conveyed?

As a result of the open coding, the established categories shows that the more prominent church-run universities intend to take such steps on the path to development just like the public universities. For example, they would like to establish trainings on the field of arts and humanities, on the field of social sciences, on the field of education in a non-religious content and also on the field of economics and computer sciences. This model is pointing in the direction of the public universities, tries to reach equality, the diverse trainings, just like public institutions. This type of institution prepares the students for a secular career, not related to institutions of churches.

The fundamentally theological institutions kept their religious identity, which can be seen on the aspects of the trainings. For example, a strong ambition can be seen on the preparation for religious-oriented social worker trainings, which shows that these institutions want to help the religious and social institutional system by preparing an appropriate workforce. It is clear that the mission of these institutions for such trainings is completely different from the previous one.

In the case of the third category, functioning with non-religious purposes, such a definite strategy cannot be drawn.

Figure 3 Training orientation of different church-run institutions in higher education



Churches can be conceptualised as the international justice system. Previously, we have dealt with the international networks of church-related institutions, and we have demonstrated its impact on the teacher and student mobility (Pusztai, Kozma, 2008), but we have not analyzed on what extent do they involve in the internalization of the trainings. According to our data, we can tell, that the more prominent church-related institutions three and the fundamentally theological institutions established one training in English during the last period. Of course, further investigation is needed, but we can state that this opens a new chance of engagement, because in a substantial part outside Europe there is no chance to establish religious trainings.

5. Conclusion

The study takes stock of consequences with those definitions which determine the segment of church-related higher education. In this study, we wanted to determine the own identity of church-related higher education institutions by analyzing the innovations relying on the training provisions. The previous supplementary role has been replaced with the role which responds to the competitive situation. We considered that the initiations of the Hungarian church-related higher education institutions show that they are highly active and determined in the field of development. The more prominent church-related institutions with many faculties will compete with the public institutions. The fundamentally theological institutions are also highly active in the initiations, only just their mission is different; they want to enrich the skills of the social respondent of the church-related higher education institutions.

References

Hrubos, I. (2002): A "bolognai folyamat": európai trendek, a Bolognai nyilatkozatból adódó strukturális változtatások megvalósíthatósága a magyar felsőoktatásban. Kutatás közben, Budapest.

Hrubos, I. (ed.) (2012): Elefántcsonttoronyból világítótorony. A felsőoktatási intézmények misszióinak bővülése, átalakulása, AULA, Budapest.

Kozma, T. (2005): Moral education in Hungary fifteen years after the transition. Journal of Moral Education, 34(4), pp. 491-504.

Kozma, T. (2008): Political Transformation and Higher Education Reforms, European Education, 40(2), pp. 29-46.

Kozma, T., Polónyi, I., Pusztai, G.(2017): Higher Education Systems and Institutions, Hungary, In: Teixeira, Pedro; Shin, Jung Cheol; Amaral, A; Bernasconi, A; Magalhaes, A; Kehm, B M; Stensaker, B; Choi, E; Balbachevsky, E; Hunter, F; Goastellec, G; Mohamedbhai, G; de Wit, H; Valimaa, J; Rumbley, L; Unangst, L; Klemencic, M; Langa, P; Yang, R; Nokkala, T (ed.) Encyclopedia of International Higher Education Systems and Institutions, Springer Netherlands, pp. 1-9.

Kwiek, M. (2014): Structural changes in the Polish higher education system (1990-2010): a synthetic view. European Journal of Higher Education, 4(3), pp. 266-280.

Nowak, M. (2010): Church-related Higher Education in Poland. In: Pusztai, G. (ed): Religion and Higher Education in Central and Eastern Europe, pp. 55-79.

Polónyi, I. (2014): Felsőoktatási továbbtanulás kistérségi összefüggései, Iskolakultúra, (5), pp. 3-17.

Pusztai, G. and Finánccz, J. (2003): A negyedik fokozat iránti társadalmi igény megjelenése, Educatio 4, pp. 618-634.

Pusztai, G. (2010): Place of religious culture in Central and Eastern European higher education. In: Pusztai, G. (ed): Religion and Higher Education in Central and Eastern Europe, pp. 19-36.

Pusztai, G., Morvai, L. and Inántsy-Pap, Á. (2015): The Role of Churches in Higher Education in Four Central and Eastern European Countries. ECER presentation.

Pusztai, G. and Farkas, Cs. (2016): Church-related Higher Education in Eastern and Central Europe Twenty Years after Political Transition. In Máté-Tóth, A. and Rosta, G. (ed): Focus on Religion in Central and Eastern Europe: A Regional View, pp. 204.

Rozanska, A. (2010): The Czech Model of Higher Religious Education after 1989. In: Pusztai, G. (ed): Religion and Higher Education in Central and Eastern Europe, pp. 82-93.

Prochazka, P. (2010): Church-Related Higher Education in the Slovak Republic. In: Pusztai, G. (ed): Religion and Higher Education in Central and Eastern Europe, pp. 95-108.

Szolár. É. (2010): Romanian Church-related Higher Education in Comparative Perspective. In: Pusztai, G. (ed): Religion and Higher Education in Central and Eastern Europe, pp. 39-54.

Zielińska, K. and Zwierżdżyński, M. (2013): Religous Education in Poland. The Routledge International Handbook of Religious Education, pp. 264-271.

’Best Practice’ Organizational and Management Solutions in some Successful Higher Education Institutions

Gabriella KECZER, Gergely KOVÁTS

Abstract

The paper focuses on organizational and management solutions implemented in some successful higher education institutions to foster development, efficiency, excellence and financial sustainability. Desk research was carried out focusing on ten higher education institutions that proved to be excellent in several indicators in the U-Multirank system, and/or have a high or improving position in the different international rankings. In this paper, five cases are presented in detail: the University of Antwerp, the University of Barcelona, the Higher School of Economics in Moscow, the University of Tartu and Aalto University. However, in the last chapter, the conclusions of all the ten cases are summarized.

1. Introduction

The higher education arena is characterized by a strong competition of universities for students, resources and cutting-edge faculty, while stakeholders expect them to provide more with less. Thus, it is vital to find solutions that make higher education institutions more competitive and efficient.

Desk research was carried out focusing on ten higher education institutions that proved to be excellent in several indicators in the U-Multirank system. U-Multirank assesses higher education institutions across five dimensions: teaching and learning,

research, knowledge transfer, international orientation and regional development; thus, it gives a comprehensive picture of the performance of a university. Another point in selection was the institutions position in the different world university rankings. When selecting the institutions to be studied, universities from the different regions of Europe were deliberately included – Scandinavian, Western- and Southern European institutions, as well as universities from the former communist bloc were analyzed.

The research aimed to find organizational and management solutions that may facilitate a more efficient operation, development and excellence, and support financial sustainability. The work was carried out by desk research, using publicly available data and information on the homepages of the institutions. One of the noteworthy conclusions of the research is just the fact that most of the institutions that we studied operate rather transparently, providing rich data on their websites.

Several 'best practice' solutions were identified, including well-grounded and well-elaborated strategic planning along with consistent development; intelligent organizational solutions that support meeting the strategic goals; mutually beneficial networking and strategic alliances between different universities as well as between higher education institutions and other organizations; transparency, visibility and communication that strengthen trust, attract funding and invite cooperation. The example of some universities in the post-communist countries shows that the lag can be reduced with professionalism in governance and management. In this paper, some best practices from five institutions will be presented in more details. These institutions are the University of Antwerp, the University of Barcelona, the Higher School of Economics in Moscow, the University of Tartu and Aalto University.

2. Best practices

2.1. University of Antwerp (UA)

The University of Antwerp (Belgium) is the 15th in the 2018 Times Higher Education Young University Ranking and the 17th in the 2019 QS Young University Ranking. In the 2019 Times Higher Education World University Ranking, the institution is in the 201-250 domain, in the 2019 QS World University Ranking it is the 223rd. In the U-Multirank, from the 25

available indicators, it is "excellent" in 12, and "good" in 5 further indicators. [1] The university performs excellently in all the indicators concerning own revenues, such as income from regional sources, external research income (not base-grant from the government), income from private sources (private funding for research and knowledge transfer), income from continuous professional development. (U-Multirank)[2] Other notable achievements of the institution are that it offers 16 masters and 6 advanced masters in English above its doctoral programs. One-fifth of the 20.000 students are from abroad.[3] Among its best practices, the cooperation-based development and the innovation ecosystem are the most noteworthy.

Cooperation-based development

The University of Antwerp is an excellent example of cooperation-based development. Its history, as well as its present strategy, clearly show the process of different HEIs turning into an organization -- and with the joining of further institutions into an association – that can obtain the critical mass to operate efficiently. The *Antwerp University Association* (AUHA) is the strategic alliance of four local HEIs (University of Antwerp, Artesis Plantijn University College, Antwerp Maritime Academy, Karel de Grote University College). So in the case of Belgium, the solution was not the (forced) integration of HEIs – like in Hungary – but cooperating on every filed that can increase efficiency, while the institutions kept their independence.

The Antwerp University Association (AUHA) aims to build expertise and share knowledge in education, research, services and student facilities. The Education working group develops educational initiatives. Another branch of the association is ELAnt (expertise network for teacher training in Antwerp). The Blackboard digital learning platform is also a product of the educational partnership. Within the association, the emphasis currently lies on 'academicising' the university colleges' academic programmes.

The member institutions of the AUHA are also cooperating in research, development and innovation. Creation of spin-off companies is one way of valorizing technologies developed at the AUHA and is an alternative for licensing to an established business. They

[1] „Excellent" is the best, „good" is the second best category on a 5-stage scale.
[2] THE Ranking 2019: https://www.timeshighereducation.com/world-university-rankings/2019/world-ranking#!/page/0/length/25/name/antwerp/sort_by/rank/sort_order/asc/cols/stats
UMR: https://www.umultirank.org/study-at/university-of-antwerp-rankings/
[3] https://www.uantwerpen.be/en/about-uantwerp/facts-figures/

invite inquiries from corporations and business enterprises also on AUHA-level, and via the so-called *Interface service,* they have access to each others' research activities The expertise unit for science communication is also a branch of the association.[4]

Together, the association's institutions offer a wide range of services to graduates of secondary education. The Internationalisation departments and the libraries confer with each other in consultation groups. The association also provides a forum for taking a shared approach to student services such as student housing, student jobs, study funding, mobility, culture and sport. Students also have a student council at the association level.[5]

Innovation ecosystem

Antwerp is an excellent example of how to build a coherent support system in and around the universities that fosters the establishment of knowledge-based companies, spinoffs, innovativeness at the universities and the enterprises, university-business relations, research management, the marketisation of knowledge, entrepreneurship. The ecosystem is backed by financial funds that go beyond the typical financing of research at universities.

In the university

The *Department of Research Affairs and Innovation* (DRAI) is the research supporting unit of the University of Antwerp. Its staff members assist the University of Antwerp's researchers in various ways. They help find suitable sources of funding, both internal and external, and means of valorising researchers' findings. They also organise quality assurance processes for research conducted at our university and are responsible for a variety of legal aspects (contract follow-up, intellectual property rights, etc.). DRAI is not only there for the University of Antwerp's researchers: it is also crucial for the outside world. Businesses or organisations searching for specific expertise or wishing to collaborate with the university can contact the staff in the Interface service. As a result, the DRAI serves as a bridge between the outside world and our researchers. It integrates these units:

- Grants Office
- Valorisation Office

[4] https://www.uantwerpen.be/en/research-and-innovation/info-for-companies/spin-offs/
[5] https://www.uantwerpen.be/en/about-uantwerp/organisational-structure/antwerp-university-association/

- Research Affairs Unit
- Antwerp Doctoral School.

University-environment interface

The *Antwerp Science Shop* is a service provided by the University of Antwerp. Non-profit organisations can use this service to access scientific support in the form of research or advice. In turn, their questions generate opportunities for socially relevant dissertation research. The research is predominantly carried out by students as part of their Bachelor or Master dissertations, under the guidance of an experienced researcher. So, the Science Shop does not carry out the research itself. Instead, they assist in transforming common questions into research questions and act as a mediator between organisations and researchers. Most questions submitted to the Science Shop are transformed into Bachelor or Master dissertation topics. The Science Shop recruits students who are prepared to take on these topics. The research is conducted at the lowest possible rates. The organisation is expected to meet the cost of the research either in whole or in part, and the contribution depends on the kind of research being conducted and the organisation's financial resources. The financial arrangements between the organisation, the Science Shop and the student researcher are determined in the budget and the contract.[6]

Antwerp.Smart Region Link (SRL) is a network organization that strengthens the links between the university and companies in Antwerp. It is a collaboration between UAntwerp and Voka - Chamber of Commerce Antwerp - Waasland. The Province of Antwerp supports the organization. The primary mission is to support and strengthen the innovative knowledge region by bringing together researchers and entrepreneurs, via Antwerp.SRL, researchers can quickly discover business partners and potential research collaboration. Antwerp.SRL organizes a wide range of events, from generalistic to more focused theme events.[7]

To help external constituencies to find the proper partners inside the university, a searchable database called *Find an Expert* was established on the website of the institution. Besides, extensive and well-structured information is available about the scientific expertise UA faculty can provide. This site, called the *Research Overview,* can be searched by topic and by researcher.[8]

[6] https://www.uantwerpen.be/en/research-and-innovation/science-for-everyone/science-shop/
[7] https://www.uantwerpen.be/en/research-and-innovation/info-for-companies/valorisation-at-uant/antwerp-srl/
[8] www.ua.ac.be/main.aspx?c=ONDERZK&n=96890&ct=96876; www.uatw-erpen.be/en/research-and-innovation/ research-overview

Around the university

TAKEOFFANTWERP is an initiative led by the Antwerp University Association (University of Antwerp, Artesis Plantijn University College, Antwerp Maritime Academy and Karel de Grote University College) and the city of Antwerp which aims to support entrepreneurship among students. Cooperating partners are student association SINC, youth center KAVKA and the chamber of commerce VOKA SINC and VOKA. The program focuses on the development of competencies related to entrepreneurship by students in their bachelor's or master's degree, regardless of their field of study.[9] Students can apply for 'student entrepreneur' status. This status gives them support through coaching tailored to their needs. The coaching is provided by experts associated with UAntwerp, TAKEOFFANTWERP and/or other UAntwerp partners. Coaching is made to measure and can cover various areas of expertise such as intellectual property, business modelling, costing, networking, etc. As a student entrepreneur, they can request special educational and/or exam considerations. In addition, TAKEOFFANTWERP provides access to work or office space, meeting rooms and participation in TAKEOFFANTWERP events.

The Science Park University of Antwerp is a stimulating business park for innovative entrepreneurs in the field of Life sciences and Environmental sciences, enabling them to start up, grow and keep innovating successfully. This dynamic network facilitates cross-pollination between entrepreneurs, experts, knowledge institutes and governments. The Science Park University of Antwerp has a complementary and high-quality offer of business infrastructures in the lease, rent and purchase formulas, as well as grounds. *Incubator Darwin* is the heart of the park. The common facilities of the incubator can be used by all park users and even third parties, making Darwin an ideal meeting point. Services are offered by a network of high-quality providers and comprise advice services in the field of tax law, accountancy, HR and government grants. Seminars and events organised as part of the incubator Darwin enrich companies with knowledge from the park network.[10]

[9] https://www.takeoffantwerp.be/
[10] https://www.wetenschapsparkuantwerpen.be

Financial background

The *Industrial Research Fund* (Dutch abbrev.: IOF) is an earmarked university fund that is annually fed with a block grant from the Flemish government. The distribution of this fund among the different associations occurs according to a yearly calculated distribution key, whose components (parameters) are oriented primarily towards valorisation (industrial revenues, patents, spin-off companies). IOF projects and grants are allocated on the advice of the Industrial Research Fund Council, which is composed of the university, the high schools of the Antwerp University Association, as well as many business representatives. Allocation of IOF resources is subject to a set of conditions imposed by the government. As such, the Association appropriates IOF resources for the following purposes:

- appointment of IOF research and innovation managers, who are integrated into a consortium of research groups that have proven successful in carrying out application-oriented research and in valorising the results of this research for the benefit of the industry. The aim is to increase the valorisation/research portfolio of these groups;
- bench fees (start grants) for these managers;
- proof-of-concept projects with the aim of making a finding market-ready;
- one-year (or longer) projects of strategic research.[11]

Qbic is a seed and early-stage and sector agnostic inter-university fund investing in spin-offs and young innovating companies that have a technology link with Qbic's partner universities and research institutions. Qbic is managed by an independent team of seasoned investment and business professionals. The first Qbic fund - Qbic I - was incorporated in 2012 with a capital of € 40,7 million and invested in 18 companies. Qbic I is currently focusing on follow on investments and exits. The second Qbic fund - Qbic II - started in December 2016 and has a capital € of 58,9 million. With an aggregate close to € 100 million under management, Qbic is one of the largest inter-university spin-off funds in Europe.[12]

[11] https://www.uantwerpen.be/en/research-and-innovation/management/funding/internal-funding/industrial-research-iof/
[12] http://qbic.be/

2.2. University of Barcelona

The University of Barcelona (Spain) is the 19th in the 2018 Times Higher Education Europe Teaching Ranking. It is the 166th in the 2019 QS World University Ranking. It is in the 151-200 domain in the 2018 ARWU (Shanghai) Ranking and in the 201-250 domain in the 2019 Times Higher Education World University Ranking. In the U-Multirank, from the 29 available indicators, it is "excellent" in 9, and "good" in 9 further indicators.[13] The University of Barcelona is the 65th in Reuters *Europe's Most Innovative Universities* ranking.[14] Reuters empathises that the number of spinoffs has been increasing permanently since 2000. At present the institution has 24 spinoffs; in the 2014-2015 academic year 5, in 2016 4 new spinoffs were founded, and the university has 93 registered patents. The fact that in 2011, the university had only 18 patents clearly shows the dynamic expansion of its commercial intellectual property. The number of research projects of the University of Barcelona is outstanding even on the European level, and 100 million EUR income has been obtained by knowledge and technology transfer. (UB in Figures 2017) Another notable achievement of the institution is that it has 23 masters and 48 doctoral programs in English, 37% of masters students and 31% of doctoral students are from abroad. (Report on the academic year 2015-2016)

Among its best practices, some smart organizational solutions are the most noteworthy. First, several organizational units were established that are responsible for the efficient management of such revenue-generating activities as lifelong learning, university-business cooperation, entrepreneurship. Second, the university applies organizational solutions that unite the available resources and facilitate the well-coordinated collaboration of different units.

Research activities are managed by the office *Research Management*, which is in charge of national research programs, the UB office *International Research Projects*, which is responsible for European projects, and the *Bosch i Gimpera Foundation*, which oversees knowledge transfer and relations with the business sector (see later). The *Science and Technology Centres* are a group of university centres that support research both in the university and in other public and private institutions.

The *University of Barcelona Group* (UB Group) is a group of entities with legal autonomy over their capital. The university is the founder of these entities, and it has

[13] THE Ranking 2019: https://www.timeshighereducation.com/world-university-rankings/2019/world-ranking#!/page/0/length/25/name/barcelona/sort_by/rank/sort_order/asc/cols/stats
UMR: https://www.umultirank.org/study-at/universitat-de-barcelona-rankings/
[14] https://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT

ultimate responsibility for determining the political and strategic course of action to be assumed by each member of the Group. At the same time, it guarantees the collaboration, coordination and synergy of the activities of Group members through their individual governing bodies. The university safeguards the decision-making and control capabilities – both economic and legal – of UB Group entities and holds majority voting rights in them. It can also appoint and dismiss most of the members of their governing bodies. [15] The most important UB Group members – the Bosch i Gimpera Foundation, the UB Innovative and Scientific Culture and the Institute for Lifelong Learning Foundation – are described below.

The *Bosch i Gimpera Foundation* (BGF) is the foundation of the university and is responsible for connecting the university and the business sector to transfer innovation to society by:

- Contact Research: The BGF offers companies the possibility of improving their products and services by contracting these out to researchers and research groups of the University of Barcelona. There is an online database called Experts' Guide to help to find the right professionals at the university.16
- Business Creation: The BGF promotes the creation of innovative companies arising from UB research projects and fosters their growth and consolidation
- Technology transfer: The BGF transfers innovation developed at the University of Barcelona to companies through licencing.
- Grants and funding: The BGF provides information and advice to turn innovation transfer into a reality. They offer up-to-date information about the different kinds of grant calls (fellowships, prizes, etc.) promoted by the Bosch i Gimpera Foundation, about the European projects, and also about calls funded by other entities that might be of interest.
- Management support: The BGF offers support and tools for the management of innovation projects in legal, economic, regulatory and technical aspects. They keep the accounting of projects using the Extractes applic*ation* -- a complete management intranet -- that includes a series of manuals to help manage one's project.[17]

In 2018, the collaboration between the UB and the different socio-economic agents had allowed the development of 640 projects and resulted in € 32.62 million in revenue through the Foundation.[18]

[15] https://www.ub.edu/web/ub/en/universitat/grup_UB/grup_UB.html
[16] http://www.ub.edu/experts/
[17]https://www.ub.edu/web/ub/en/universitat/grup_UB/detall/fundacio_bosch_i_gimpera.html
[18] http://www.fbg.ub.edu/en/what-we-do/the-fbg-in-figures/

Table 1 shows the increase of the income from research and technology transfer between 2011-2016.

Table 1. Income from research and technology transfer between 2011-2016

	2011	2012	2013	2014	2015	2016
Total income from research and technology transfer (thousands of euros)	**74 336**	**56 832**	**70 344**	**88 156**	**88 988**	**107 326**
Projects	24 915	23 248	19 997	25 312	31 471	47 384
Funding	11 217	3 134	15 172	19 997	13 740	7 681
Infrastructure	1 659	-	-	186	-	657
UB research agreements	2 503	2 471	194	538	248	445
FBG agreements	6 850	9 263	9 600	11 971	10 865	12 532
Complemetary actions	-	-	401	305	369	-
Services provided by Science and Technology Centres to other institutions	-	-	3 057	2 901	3 236	3 250
Income generated by UB researchers at other institutions	27 182	18 716	21 943	27 108	35 244	35 377

Source: https://www.ub.edu/web/ub/en/recerca_innovacio/recerca_innovacio/xifres/xifres.html

UB Innovative and Scientific Culture was created in 2003 to hold, manage, administer and make calls on shares in possible spin-off companies in other technological and scientific initiatives within the UB Group. It is in charge of grouping shares held or bought from other societies in the UB Group, while the Bosch i Gimpera Foundation has responsibility for monitoring the everyday work and possible capital expansions of the companies in which it has a stake.[19]

The *Institute for Lifelong Learning Foundation*'s educational offer brings together all disciplines of science and the arts into a broad range of courses (face-to-face, blended and e-learning) of different lengths, from master's degree courses and postgraduate studies to seminars and personalized training for professional communities and companies. The foundation was established in 2007.[20] In 2016-2017 the university had more than 19.000 LLL students in its 540 LLL courses. (UB in Figures 2017)

[19] https://www.ub.edu/web/ub/en/universitat/grup_UB/detall/cultura_innovadora_i_cientifica_UB.html
[20] https://www.ub.edu/web/ub/en/universitat/grup_UB/detall/il3_universitat_de_barcelona.html

The *Barcelona Knowledge Campus* (BKC) is a joint project of the University of Barcelona and the Technical University of Catalonia launched in 2008. It merges the two universities' training, research and innovation potential. The result of this partnership is a territorial campus defined but not restricted to, by three areas of specialization: life sciences, social sciences and technologies. BKC also covers other thematic areas following the same standards of excellence: architecture, engineering, sciences and fine arts. The Barcelona City Council, the Chamber of Commerce of Barcelona and the Spanish National Research Council, are also partners. Some of its objectives are:

- Coordinate actions and maximize the visibility of the different organizations comprising this alliance.
- Consolidate teaching excellence in the degree programmes.
- Increase academic efficiency by focusing efforts on preferred or priority areas for the alliance and facilitating employability.
- Commit to active mobility policies which promote and increase student exchanges and the mobility of teaching and research staff.
- Make new research infrastructures and innovation services managed in a professional, efficient manner available to the alliance.[21]

Some results of the project between 2008-2014:

- Number of international master's degree and doctoral students 1.966 → 3.186
- Number of international doctoral students 539 → 2.091
- Number of Erasmus Mundus master's programmes 9 → 16
- Teaching innovation projects 76 → 182
- Value of research contracts signed with companies 4.779.780 → 10.713.741
- National and international patents generated in the past three years 192 → 355
- Licensing contracts signed with external organizations 15 → 46
- Number of companies in residence at the alliance's science and technology parks 62 → 96
- (Barcelona Knowledge Campus Project Report 2014)

[21] https://bkc.ub.upc.edu/en?set_language=en

2.3. Higher School of Economics in Moscow

The Higher School of Economics in Moscow (HSE, Russia) is the 38th in the 2019 QS Young University Ranking, the 84th in the 2018 Times Higher Education Young University Ranking. The institution improved its position in the Times Higher Education World University Ranking: in 2017 it was in the 401-500 domain, in 2019 it is in the 301-350 domain.[22] The business incubator of the institution, the *HSE{Inc}* has ranked the 7th best incubators of the world by UBI Global 2018.[23] Other notable achievements of the institution: Although it is a young university, founded in 1992, it is one of the leading universities of Russia, and, in economics and social sciences, it is outstanding even in Europe and Eurasia. A significant achievement is that the HSE offers 80 online courses, and the number of its MOOC students is over 1 million. The institution has 41 double and parallel degrees with foreign universities and 28 own programs in English. In 2015 the total revenue of the institution was 13 billion rubles (approx. 170 million EUR), and that means a 45% increase compared to 2012.[24]

Among its best practices, two things are the most noteworthy. One is the very conscious development strategy in line with governmental policies and the institutional solutions that guarantee the successful implementation of the strategic goals. The other is the business incubation in the HSE.

Development, strategy

Since its founding in 1992 HSE has developed from an economics institute into a comprehensive state university. Based in Moscow, with branches in St. Petersburg, Nizhny Novgorod, and Perm, HSE continues to grow.

- In 2009, HSE became Russia's only national research university specializing in social sciences and the humanities. The following year, it became an autonomous educational institution and was renamed National Research University - Higher School of Economics (HSE).
- In 2010 HSE opened its first international research laboratories. Renowned international scholars and leading HSE researchers jointly head them.

[22] UMR: https://www.umultirank.org/study-at/national-research-university-higher-school-of-economics-rankings/
[23] https://strategy.hse.ru/en/rating/
[24] https://www.hse.ru/en/info/

- In 2011, HSE acquired the Moscow State Institute of Electronics and Mathematics, the Management Training Centre, and the GASIS Academy of Continuing Professional Education.
- In 2013 the HSE began to work with Coursera. Over the course of a year, a total of 350,000 people from 190 countries enrolled in HSE courses.
- Also in In 2013, the *HSE Lyceum* opened as part of the university. It is the first secondary school in Moscow that teaches according to new education principles, promoting 'cooperation and mutual respect, regardless of age and status'. The HSE Lyceum has become one of Russia's top 10 secondary schools and ranks as the second best school in Moscow. It is regarded as the best school in the country for social sciences, humanities and economics.
- In 2014 HSE established a new Faculty of Computer Science.
- In that same year, major internal reforms began at HSE with the creation of 'big faculties', which are responsible for implementing educational programmes. The main reasons for the reform were the need to optimize management, to transfer resources and responsibilities from the central budget to big departments, as well as to overcome 'departmentalization' (when certain subjects had little or no interaction with those in other departments). As a result, by the beginning of 2015, 11 big faculties had been formed at the Moscow campus from 28 faculties and schools.
- In 2015, the first HSE online courses opened on the National Open Education Platform.
- The same year HSE's student government was reformed to include a United Student Council and a Student Rights Commissioner.
- In 2016, a new position was introduced in the university management structure. The Vice President is responsible for developing the strategy for HSE's innovative ecosystem, building relationships with the technology industry, and creating mechanisms of feedback from employers to adjust the competency requirements of university graduates.
- The same year a Faculty of Physics was founded as part of HSE. The faculty was created in collaboration with leading Russian Academy of Science institutes such as the Landau Institute for Theoretical Physics, the Kapitza Institute for Physical Problems, the Institute of Solid State Physics, the Prokhorov General Physics Institute, the Institute for Spectroscopy, and the Space Research Institute.[25] (HSE 25 Years Facts and Figures)

[25] https://www.hse.ru/en/info/hist/

In 2008, the university adopted a long-term Development Strategy up to 2020. The goal is to make HSE internationally-recognized cutting-edge research, educational, analytic, consulting and project centre in social sciences and economics. It seeks to make major contributions to Russia's innovative development and global competitive ability.[26] It seems rather remarkable that the institutional strategy is in line with several governmental policies. The first is the *Development Program as a National Research University* launched in 2009. The program's strategic goal is to make the winner institutions centres for research and education that joins the ranks of the world's leading research universities in terms of the quality of its capabilities and results.[27] The second is the *Innovative Infrastructure Development* that started in 2010. Its primary purpose is to form a complex system to generate innovation and develop a sustainable model of innovative interaction between science, business and society in the knowledge economy.[28] The third is the *5-100 Russian Academic Excellence Project* launched in 2012. The goal of the project is to develop modern, world-renowned universities in Russia, to ensure that at least five Russian universities rank among the top one hundred of the world's leading universities by 2020.[29] The HSE won all the three projects in open competition.

It is an important strategic decision that – although the institution has the intention of keeping its broad educational and research portfolio, from 2016 the resources are concentrated on those research areas where they are competitive on a global level. These are, for example, Foresight and Science, Technology and Innovation, Cognitive Neuroscience: from Computational Models to Neurotechnology, Education and Human Development in Changing World, Urban and Transportation Policy. On these areas, so-called strategic academic units were established. They are either international consortia or excellence centers.[30]

Besides the traditional academic bodies like the *Academic Council*, several bodies were set up to oversee the effective operation of the institution and the implementation of its strategy.

- A *Supervisory Council* was established to conduct public expertise and control the process and efficiency of the strategy's implementation. The council consists of representatives from the government, expert communities, corporations, business associations, media, and the public. The council regularly evaluates the effectiveness of strategy implementation. It provides

[26] https://strategy.hse.ru/en/, https://strategy.hse.ru/en/mainNRU
[27] https://strategy.hse.ru/en/mainNRU
[28] https://strategy.hse.ru/en/mainIID
[29] https://strategy.hse.ru/en/about5-100
[30] https://strategyunits.hse.ru/en/

recommendations on amendments to HSE's Charter, the establishment of branches and representative offices, draft plans for HSE financial and economic activity, HSE financial audit procedures, and other issues.

- The International Advisory Committee is an advisory body of HSE which monitors and measures the University's progress towards improving its international competitiveness among leading global educational and research centres.
- The Board of Trustees was established to help solve short-term and long-term challenges related to the university's development. It also serves to attract and supervise the use of additional financial resources to support its activities in priority areas of development.
- The Supervisory Council of the HSE Development Programme monitors and carries out expert reviews of the effectiveness of the development programme for the 2009-2018 period.[31]

The human resources indispensable for the strategic development is to be ensured by raising the monthly salary of leading young researchers will be raised from 280.000 rubles (approx.3.700 EUR) to 480.000 rubles (6.400 EUR) by 2020. (PLACING HSE ON THE GLOBAL UNIVERSITY MAP [32])

Business Incubation

The *HSE{Inc}* is the business incubator of HSE. It was founded in 2006 by students and professors, to provide an environment where young entrepreneurs can build and develop their start-ups. It was the 1st students' business incubator in Russia. The HSE{Inc} has quickly become a catalyst for student entrepreneurial activities far beyond the university's walls. It was ranked the 7th best incubators of the world by UBI Global 2018 (in 2015 it was the 14th, so it is steadily improving its position).

The incubator has a coworking space, where best startups (the "residents") work and develop their own business. There are 15 startups in residence, but more than 30 projects receive services regularly. Up to now, 480 startups have been supported. They get a fully equipped office space, administrative and consulting support. They also enjoy free participation at HSE and industry events and take full advantage of networking

[31] https://www.hse.ru/en/info/governance/
[32] https://strategyunits.hse.ru/en/

opportunities provided by the incubator's team. There are two special programs for startups:

- ***HSE{consult}*** provides a full range of free consulting services to all startups and technological projects. Topics of consulting include patent services, due diligence, marketing and promotion, legal services, taxation etc.
- ***HSE{pro}*** is a program for the residents. It includes educational and consulting support as well as office space. Companies receive full support from the incubator team, experts and professionals in various fields. The program of support depends on individual goals and needs of the residents. Together with the incubator team young entrepreneurs create and develop the strategy of their company, marketing plan, calculate the financial plan etc. The incubator offers a real opportunity to find a mentor from the professional and to raise the investment.

Besides, there is a project called the "Startup of the Year", an award for young entrepreneurs, a Case Championship, and a contest of business projects. There are more than a hundred events per year, with more than 8.000 participants. The incubator hosts the Centre of Prototyping and 3D-modeling and the Centre of Social Entrepreneurship.

Teaching entrepreneurship also contributes to the success of incubation. The entrepreneurship courses of the HSE{Inc} are so popular that 60% of the participants come from other higher education institutions. Spotting the best business ideas and managing the best entrepreneurship students is part of the program. The most talented students become residents for two years. The business game of the HSE called Iron Entrepreneur are also very popular abroad. The university cooperated with the best similar initiatives of foreign institutions, such as the MIT Enterprise Forum, the Aalto Venture Garage or the University of Texas StartupSauna. [33]

[33] https://inc.hse.ru/

2.4. University of Tartu

The University of Tartu (Estonia) is the 321st in the 2019 QS World University Ranking and improved its position in the Times Higher Education World University Ranking: in 2016 it was in the 351-400 domain, in 2019 it is in the 301-350 domain. It is the 321st in the 2019 QS World University Ranking.[34] It means that it is among the top 2% of the world's best universities. Other notable achievements of the institution: Despite the turbulent historical context, including the Soviet era, the institution has preserved the values and mission that raised it among the top universities of the world. The UT' scientific performance is outstanding; it is the member of the Coimbra Group, a prestigious club of renowned research universities and the Guild of European Research Intensive Universities. According to the ISI Web of Science, Twente is among the top 1% of the most cited research institutions. Although the UT is a small institution compared to the large, multi-faculty Hungarian universities (with only 56 bachelors and 68 masters), it offers 23 bachelor and aster programs in English and 33 doctoral programs, 26 in English.[35] At the same time, the University of Tartu is the biggest in-service training provider in Estonia. There are more than 1600 in-service training courses with more than 35 000 students a year. (Our People 2016, (University of Tartu 2016, Annual Report 2016)

Among its best practices, the most noteworthy is the strategic planning and the so-called ADAPTER, a national initiative to foster the cooperation of universities and enterprises.

Strategic planning

The Strategic Plan of the University of Tartu for 2015-2020 adopted in 2014 was created with the explicit intention to ensure the sustainability of the institution after 2021, when financial support from the EU framework programs may not be available. In 2012-2013 the management of the UT analyzed the development curve of the institution, its strengths and weaknesses, the national and global trends of higher education, and defined the areas to be improved till 2020. The strategy is clear, exact and publicly available.

[34] https://www.ut.ee/en/university/general
[35] https://www.ut.ee/en/university/general

The strategy visions the institution in 4 dimensions:

- as a national research university at the international level
- as a university of lifelong learning
- as an enterprising university and
- as a developing organization.[36]

So far so good, but the strategy is a textbook example in the sense that it has exact, quantitative objectives and indicators attached to the strategic areas (see Table 2.), and an action plan is adopted each year with milestones and measurements that are necessary to meet the goals (e.g. Action plan for 2018 of the University of Tartu Strategic plan). Annual reports are published to ensure transparency and accountability, and all the data can be tracked on the website of the university.[37]

Table 2 Key performance indicators 2017

DEVELOPMENT AREA AND INDICATORS	OBJECTIVE
National research university at the international level	
Number of high-level research publications per academic staff member	> 1.3
Percentage of publications among the world's top 10% most cited research publications	> 12%
Percentage of revenue from R&D not funded from national funding programmes in the total R&D revenue	> 32%
University of lifelong learning	
Share of students admitted to the first level of higher education at the University of Tartu among all students admitted to the first level of higher education in Estonian higher education institutions	≥ 23%
Number of continuing education learners	≥ 35,000
Percentage of completed entrepreneurship courses in the total volume of studies	≥ 5%
Students' overall satisfaction with teaching and courses	≥ 4.0
Interruption rate in the first and second level of higher education	≤ 15%
Percentage of doctoral graduates in the number of students admitted four years (standard period of study) ago	≥ 50%
Percentage of English-taught curricula in the first and second level of higher education	≥ 25%
Percentage of international students	≥ 12%

[36] https://www.ut.ee/en/university/strategy
[37] https://www.ut.ee/en/indicators

DEVELOPMENT AREA AND INDICATORS	OBJECTIVE
Developing organisation	
Percentage of international academic staff	≥ 10%
Percentage of academic staff who participated actively in teaching-related development activities	≥ 15%
Income per academic staff member	≥ 123,000 EUR
Percentage of structural units in a good or satisfactory financial standing	100%
Employees' overall satisfaction	≥ 93%
Reputation	
UT master's graduates' satisfaction with their competitiveness in the labour market	≥ 90%
Evaluation of the University of Tartu's entrepreneurial spirit	≥ 9,0

Own compilation based on data retrieved from the website[38]

It is important that structural changes were implemented to achieve the goals. An executive position was established to control the development process, and organizational units were set up to manage the strategic areas – Office of Research and Development, Lifelong Learning Centre, Technolgy Transfer Unit, a Centre of Innovation and Entrepreneurship. (Our People 2016, Pavlin 2017) The academic units have been restructured to be larger and more viable. A strict financial plan has been attached to the organizational strategy with reasonable measurements that ensure quality and development. For example:

- The re-election of heads of institutes and institutions takes into consideration the efficiency of the structural unit in acquiring and performing research and development agreements.
- University employees abstain from competing with the university in areas which are the university's core activities.
- The job requirements for professors, lead research fellows and senior research fellows are made more flexible. It is possible to reduce studies-related obligations with the successful performance of research and development agreements.
- In remuneration policy, salary rise is linked to performance indicators.
- The performance pay of leaders is also linked to financial indicators. (University of Tartu Financial Strategy Until 2022)

[38] https://www.ut.ee/en/indicators

ADAPTER

The University of Tartu is a member of ADAPTER, that is a national initiative that may be a good practice to follow by Hungary as well. It is a well-known fact that – particularly for SMEs – it is difficult to find a way to universities because the higher education system and its institutions are unknown and seem too complex to an external actor, they do not know whom to turn to with their inquiries. Therefore, it is rather useful to establish easy access points.

ADAPTER is a network of Estonian universities, research and development organizations, providing a quick and reliable link for companies and organizations to the research and development community. It is a one-stop-shop that enables organizations and entrepreneurs to present an inquiry to Estonian research and development institutions, search their database of all the services on offer by those facilities, see what kind of support mechanisms there are to help companies engage in research and development cooperation. Financial support can also be accessed via ADAPTER. With a single message, an inquirer can reach more than 3500 scientists and engineers within the network. Through ADAPTER, one can:

- send inquiries to all participating universities, colleges, research and development organizations at once or find a suitable cooperation partner amongst participating organizations. ADAPTER guarantees a response within 5 working days.
- find services, be it consulting, measurement or analysis or training and courses through its Services database and online interface called Ask a Scientist39.
- find available funding measures for innovation and development activities for companies.

Organizations reachable through ADAPTER are:

- University of Tartu
- Tallinn University of Technology
- Estonian University of Life Sciences
- Tallinn University
- Estonian Academy of Arts
- Estonian Academy of Music and Theatre

[39] https://adapter.ee/en/ask-us/, https://adapter.ee/en/services/

- TTK University of Applied Sciences
- Estonian Business School
- National Institute of Chemical Physics and Biophysics
- Center of Food and Fermentation Technologies
- Software Technology and Applications Competence Centre
- Biotechnology Competence Center[40]

It must be noted that the system is backed by funding opportunities. The prerequisite of accessing them is university-business cooperation. The *Development Voucher* is a supporting measure for preliminary research. The results of the development voucher should enable the entrepreneur to gain comprehensive knowledge on whether their development idea has the potential necessary for continuing the development process in other stages. The maximum grant is 20.000 EUR, and the maximum grant percentage from the entire cost is 70%. The *Innovation Voucher* enables a small and medium-sized entrepreneur who is cooperating with a higher education institute, test laboratory, or intellectual property experts, to develop innovative solutions for development obstacles, carry out tests with new materials, gather knowledge on technologies, conduct studies in intellectual property databases etc. The maximum grant is 4.000 EUR, and the maximum grant percentage from the entire cost is 80%.[41]

Partly due to the ADAPTER, the UT has a long-term relationship with 124 business partners, such as Samsung, Mercedes-Benz Driving Academy, Pfizer Jordan Oil Shale Energy Co., and signs 80-120 contracts per year.

2.5. Aalto University

Aalto University (Finland) is ranked 9th in the 2019 QS Young University Ranking, the 22nd in the 2018 Times Higher Education Young University Ranking. It is also worth noting that the institution improved its position in the Times Higher Education World University Ranking: in 2015 Aalto was in the 251-275 domain, in 2019 it is the 181st. In the U-Multirank, Aalto is "excellent" in 12, and "good" in 4 from the 31 available indicators. Aalto is worth to study for Hungarian experts because it has been converted from a state university to a private, foundation university – a transition that is in the focal point of the

[40] https://adapter.ee/en/
[41] https://adapter.ee/en/funding/

current Hungarian higher education reforms. Other remarkable achievements of the university are the following: The proportion of international academics was 4 % in 2010, but by 2016 it increased to 20%. One of the reasons was that the public servant status of academics was abolished in 2009. This increase of the proportion of foreign academics is more significant if we consider that their number increased from 230 to 386 in this period. The university became truly international: the majority of study programmes are offered in English, for example, there were only 14 master programmes in Finnish in 2018. Emphasis is placed on internationalization. Emphasis is placed on research excellence. In 2016 23 ERC grants were in progress, and 8 ERC grants were finished by that time. The institution is successful in attracting EU funding (21 million EUR in 2016) and corporate financing (13 million EUR in 2016). (Financial Report 2016)

Among its best practices, the most noteworthy are the following. The institution had been transformed from a state university to a foundation university in 2009, and it had several positive effects on its performance and finances and has changed its career system radically. The other is the remarkable innovation ecosystem in and around the university.

From state to foundation university

The new Universities Act, adopted in 2009, has strengthened the independence, financial and legal autonomy of universities to enable institutions to meet social expectations better. Accordingly, the legal status of the institutions was also re-regulated. The institutions were out of the state budget and could choose to operate as a public corporation or as a foundation university. Aalto chose the latter one together with Tampere University of Technology.

With the university becoming an independent legal person and empowered to make independent financial decisions, its financial capabilities have been expanded (borrowing, asset management). The new law has enabled universities to create financial endowments. The government promised half a billion euros to the Aalto University if it managed to collect 200 million euros from outside partners. The university has a significant corporate network because the smaller size of Finland resulted in that most larger companies have links to one of the predecessors of Aalto University. The University was able to mobilize their support; thus it received the promised government support although it was decreased because of the financial crisis between 2008 and 2012. According to the university's financial report for 2016, Aalto Foundation had 948 million euro at the end of 2016, with an investment return of EUR 8 million in 2016 that the university can also manage.

The other factor is that the foundation may have a share in other companies. The Aalto University also has more shares, which together with the University, make up the Aalto Group. The Group includes Aalto University Properties Ltd (100%), which is responsible for operating and developing the University's real estate, and Aalto Holding (100), which manages the affiliates and holdings of Aalto Foundation. The holding company manages, among others, Aalto Executive Education Ltd. (provides leadership training services and services), Sannas Manor Ltd. (conference hotel operation). The university also has many other companies, such as sports and event organization, accommodation, publishing, real estate development and innovation. The university also has a share in a shared education and research organization (Funidata), which is jointly owned and operated by Finnish higher education institutions. The results of the Aalto Group can also be used for the benefit of the University, amounting to EUR 12-13 million in 2016.

Human Resource Management

The change in legal status also allowed to introduce an independent human resource policy. The staff of the university ceased to have the status of a public servant, so that the university can pursue an independent HR policy. This is also linked to an increase in the proportion of foreign professors. A career system was developed that resembles the American tenure track system.

Table 3. Career system at Aalto University

	Assistant professor 1	**Assistant professor 2**	**Associate professor**	**Full professor**	**Aalto distinguished professor**
Type of employment	fixed, 3-5 years	fixed, 4 years	fixed term or permanent	permanent	permanent
Recruitment	competitive recruiting	competitive recruiting	competitive recruiting or recruiting by invitation	competitive recruiting or recruiting by invitation	appointment
Research/ Artistic/ Professional work	65% +/-10%	60% +/-10%	50% +/-10%	40% +/-15%	negotiable
Teaching	30% +/-10%	30% +/-10%	30% +/-10%	30% +/-15%	30% +/-15%
Service	5% +/-5%	10% +/-5%	20% +/-5%	30% +/-5%	negotiable

Source: http://www.aalto.fi/en/about/careers/career_at_aalto/tenure_track/ (2018.11.03)

Innovation ecosystem

By setting up the Aalto University, the Finnish government wanted to strengthen Finland's innovation potential by creating a model for an entrepreneurial university that supports innovation. Aalto University was built around a rich and diverse entrepreneurial ecosystem. The results of this are well illustrated by the fact that 70-100 new startups are created in the Aalto ecosystem, and half of the Finnish startups are linked to Aalto University. The following examples illustrate some of the elements of the ecosystem:

- Aalto Design Factory is one of Aalto's most remarkable and well-known initiatives. Design Factory (DF) is a space that encourages free brainstorming and interaction between students, researchers, and partner corporations. The factory is based on the paradigm of open innovation, recognizing that innovative ideas are often formed not by formal structures but by informal conversations, so it is advisable to create a space where inspirational and informal, encounters are possible. Design Factory establishes the framework for this. Historically, DF has emerged from product design projects in 2008, but today, the projects are not primarily intended to meet specific corporate needs but to create innovative co-operative thinking and framing. As a result, of course, products are also made, for example in 2015-2016 a portable moisture regulator, wine alcohol reduction device or a new casino game.
- Projects initiated by students are not only supported by DF staff but also by university lecturers and business partners. This requires a different kind of role interpretation from the academics, which is also facilitated by leaving the traditional university framework. Students also require a different approach to working in DF: autonomy, responsibility, a culture of co-operation and thinking, that is, a number of transversal abilities that the university wishes to develop. This model is also very inspiring for students who spend many hours at the factory. The factory also supports the preparation of theses and advertises courses for anyone. Not only does the Aalto University work with the Design Factory, but also other Factory, including Aalto Media Factory and the recently established Aalto Health Factory.
- Aalto Entrepreneurship Society (Aaltoes): One of Europe's largest and most active student-led entrepreneurial community founded in 2009 by active and former university students. They support student entrepreneurship and have been the cradle of projects such as the Startup Sauna Accelerator Program (formerly known as Aalto Venture Garage) or Slush, a meeting of startup founders and investors (which was organized in four cities in 2016: Helsinki, Singapore, Tokyo and Shanghai).

- Aalto Center for Entrepreneurship (ACE): ACE connects the university with other incubators, accelerators and investors in the ecosystem. Its main goal is to support the creation of new startups.
- Aalto Ventures Program: An organizational unit of the university that provides students with the teaching of business subjects and related services (eg technology transfer, product marketing, etc.). In the last four years, 2000 students have studied under the Ventures Program.
- Accelerator Partners: In addition to the already mentioned Startup Sauna, startups are supported by many other accelerator partners. These include the University's organizational unit, Aalto University Start-up Center, and ImpactIglu, Kiuas.
- Aalto University Developing Entrepreneurship: Provides further training for those who are already entrepreneurs.
- Startuplifers: offers trainee programs for startups in Silicon Valley and Asia. The program was created in 2011 by Aalto University students.
- Junction: one of Europe's largest Hackathons organized by Finnish students.

3. Summary

Based on the best practices presented above and collected at five other universities, can we suggest any general direction for innovative and market-oriented universities?

3.1. Business Incubation

Encouraging the creation of startup and spinoff businesses is seen as an essential task of almost all the examined institutions – not only in theory and at the level of slogans, but also in practice: by establishing appropriate university organizations and through various services and professional programs. Most of the investigated institutions operate a business incubator, which typically provides start-up companies with infrastructure and professional services (business planning, intellectual property protection, legal services, business partners, investors, financing sources). E.g

- Aalto University's entrepreneurial and start-up ecosystem, which includes training, innovative spaces, mentoring, accelerator institutions, and events involving financiers.
- University of Antwerp Darwin Incubatora
- at the University of Barcelona, the Bosch i Gimpera Foundation, which launched 200 startups.
- HSE {Inc} is the business incubator of Moscow University, which was ranked as the 14th best university business incubator in the world by UBI Global 2015 Ranking. HSE {Inc} supports 15 resident startup businesses.
- 59 enterprises have been created under the Spin-off Program of Tartu University.

3.2. Entrepreneurship promotion

Several universities encourage university students and educators to be innovative and entrepreneurial – and therefore open to cooperation with the business sector and to the generation of knowledge that can be utilized in the market or starting a business. These institutions have recognized that innovation and entrepreneurship are not a characteristic feature of academia and university citizens, but that it is the institution's responsibility to encourage and support them. Innovative and entrepreneurial spirit not only dynamically reinforces the institution's core activities and ensures continuous development and renewal, but also contributes significantly to its own revenue-generating capacity. Encouraging innovativeness and entrepreneurial spirit in the investigated institutions have two dimensions: providing the right infrastructure conditions and professional programs.

- Entrepreneurship is one of the key strategic goals of the University of Tartu, which is why the Center of Innovation and Entrepreneurship has been created, and this is why entrepreneurship education is being expanded at the university.
- Aalto University's Design Factory, Health Factory, and Media Factory are similar to this, and the design factory is also developing internationally.
- TAKEOFFANTWERP also supports students' entrepreneurial activities. The University of Antwerp is outstandingly supportive of this by providing student-entrepreneur status to students, helping to coordinate learning and entrepreneurship. (We see the same in Aalto University's student organization.)
- Two other studied universities can be mentioned here: Moscow University encourages entrepreneurial activity with students such as the Iron Entrepreneur Competition. Otherwise, this university has been looking for a good foreign

practice to work with (eg at MIT, Aalto University or the University of Texas). Another excellent example of entrepreneurship is the initiative of the Vilnius University LinkMenu Fabrikas, which has created the right infrastructure conditions for innovative student activities. (Otherwise, the infrastructure may be used by third parties, so it generates revenue directly.)

3.3. Visibility

In each of the studied institutions, we found that various self-revenue-generating activities, such as enrollment for tuition fee programmes, making links with business partners, and fund-raising are supported by excellent website interfaces, databases and online opportunities. The English-language website of the majority of the studied institutions also far exceeds the Hungarian-language website of some Hungarian universities. In many cases, an interface or a notice for external partners or potential sponsors can be found on the opening page. However reports on successful spinoff businesses, successful product development or other projects can also be seen as well as reports from international students about their learning experiences gained at that institution:

- At the University of Tartu, university services are supported by an online database that is well-suited to external partners, where you can find services available in different disciplines. Each service has a short description and a tool for the service (photo, parameters). There is also a searchable database and an online search interface on the ADAPTER. Through the latter, entrepreneurs can send their questions and ideas to the university. The request may relate to the need for further training, using laboratory services, developing a product or process, joint research, solving a business problem, etc. The university responds to these requests within five working days, and offer suggestions for solutions.
- At the University of Antwerp, a well-searchable university website helps business partners to find the right academic partner to meet their needs. These include the Find an Expert database and the Research Overview, which can be searched and researched by research topics and researchers.
- On the University of Barcelona website, people interested in adult education are also provided with a search interface. Here you can search for courses that correspond to the potential participant by setting the subject area, faculty, type (with diploma or diploma), method of education (traditional, distance, blended), keyword, credit number, start time, but the courses can be browsed in the

alphabetical index. The University website also provides an online interface for external actors to find the right UB specialist to use the University's expertise. This is the Experts' Guide.

- Another example can be found at the website of the University of Vilnius, which also provides services to external partners, and a search interface has been set up to help external stakeholders find the right university partner. They can also be searched for by the patents of the university. The Open Access Center of the University of Vilnius was created to make the University's research activity visible.

We have also found that higher education institutions operating in the same geographical area strive for strategic cooperation in areas that can generate their own revenue.

Most of the studied institutions have a clear, definite, institutional and development strategy aimed at increasing their revenue-production capacity. In addition to creating an institutional strategy, they also use internal solutions – a plan of action, the establishment of control bodies that guarantee the achievement of objectives.

References

Aalto:

U-Multirank: https://www.umultirank.org/study-at/aalto-university-rankings/
THE Ranking 2019: https://www.timeshighereducation.com/world-university-rankings/2019/world-ranking#!/page/0/length/25/name/aalto/sort_by/rank/sort_order/asc/cols/stats
THE Young University Ranking 2018: https://www.timeshighereducation.com/world-university-rankings/2018/young-university-rankings#!/page/0/length/25/name/aalto/sort_by/rank/sort_order/asc/cols/stats

Twente:

THE Ranking 2019: https://www.timeshighereducation.com/world-university-rankings/2019/world-ranking#!/page/0/length/25/name/twente/sort_by/rank/sort_order/asc/cols/stats

UMR: https://www.umultirank.org/study-at/university-of-twente-rankings/

Antwerpen:

THE Ranking 2019: https://www.timeshighereducation.com/world-university-rankings/2019/world-ranking#!/page/0/length/25/name/antwerp/sort_by/rank/sort_order/asc/cols/stats
UMR: https://www.umultirank.org/study-at/university-of-antwerp-rankings/

Barcelona:

THE Ranking 2019: https://www.timeshighereducation.com/world-university-rankings/2019/world-ranking#!/page/0/length/25/name/barcelona/sort_by/rank/sort_order/asc/cols/stats
UMR: https://www.umultirank.org/study-at/universitat-de-barcelona-rankings/

Higher School of Economics, Moszkva:

UMR: https://www.umultirank.org/study-at/national-research-university-higher-school-of-economics-rankings/

Harvard:

UMR: https://www.umultirank.org/study-at/harvard-university-rankings/

Tartu:

UMR: https://www.umultirank.org/study-at/university-of-tartu-rankings/

Vilnius Gedimidas Technical University:

UMR: https://www.umultirank.org/study-at/vilnius-gediminas-technical-university-rankings/

Rankings:

QS World University Ranking 2019: https://www.topuniversities.com/university-rankings/world-university-rankings/2019
QS Young University World Ranking 2019: https://www.topuniversities.com/university-rankings/top-50-under-50/2019
ARWU Ranking (Shanghai Ranking) 2018: http://www.shanghairanking.com/ARWU2018.html
THE Young University Ranking 2018: https://www.timeshighereducation.com/student/best-universities/best-young-universities-world
THE Europe Teaching and Research 2018: https://www.timeshighereducation.com/rankings/europe-teaching/2018#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/undefined
THE Goldaen Age University Ranking 2018: https://www.timeshighereducation.com/student/best-universities/best-golden-age-universities

Consistory – the obscure subject of state control

Zoltán RÓNAY

Abstract

After 2014 the management structure of Hungarian state HEIs is radically changed. The introduction of the legal institution of chancellor has broken up with the traditional sole management based on the rector. The dual system was grounded in the idea of professionalism. The aim of chancellory is clear: in theory, it secures the competence in financial, administrative, etc. matters; in practice, it is a tool for the government to influence the operation of state HEIs, which leads to the delimitation of autonomy. The second step in the reorganization process was the consistory, whose goals are less noticeable. Neither the explanation nor the text of the amendment act contains the necessary information. Trying to understand the aims and role of consistory we researched in 2018 (in two periods; first the original and later a control investigation) with the method of regulation analysis, international comparison of law and did empirical research with the mixed (qualitative and quantitative) method of document analysis.

1. Introduction

The globalisation and the increasing mobility in higher education made it necessary to rethink the traditional structure of university management (De Groof, Švec & Neave, 1998). As in the Anglo-Saxon university model, the professionalism of HEI management attended, the so-called Humboldt model emphasised the role of the academia. In the literature were born more and more studies stressing the necessity of solutions, which could secure the missing professionalism. It led to the appearance of such members of university management who had not only an academic career but also had vast experience in handling financial and/or administrative matters. The other way to secure professionalism was to construct several bodies, which had either advisory or supervisory tasks.

In Hungary, after the rebuilding of autonomy of HEIs, the regulations returned to the Humboldt model. The legislator recognised the results of the lack of efficiency soon and tried to determine the rectors' responsibility more accurate, but established neither new positions nor new bodies in the management system. It needed more than ten years to reorganise this structure. The government tried to make the Hungarian management structure of HEIs closer to the Anglo-Saxon model, creating the Governing Body. With partly exterior members and substantial rights, this Body was capable of influencing the universities' operation because it took part in the decision-making process. According to the majority of university leaders, as well as the opposite in the Parliament, the power of Governance Body violated the autonomy. As the President of the Republic agreed on them, he turned to the Constitutional Court which abolished this legal institution. The government tried to secure the professional control, therefore, instead of the Governance Body established another Body, which has although the right of prior consent, but its advisory tasks were more stressed.

In 2011 the Parliament accepted a new Act [the Act CCIV of 2011 On National Higher Education (NHE Act)] without the reconstruction of a previous structure, although the problems were the same: the financial management of state HEIs was not effective, many of them had operational difficulties. However, the government emphasised more and more powerfully the necessity of changes. Hence, it was not surprising that the governance majority of Parliament immediately after the election in 2014 modified the Act introducing a new legal institution. The chancellor's appearance radically reorganised the management structure: the rector was already not the one and only responsible manager of the universities, its power reduced to the academic affairs and the chancellor became the responsible for the non-academic problems like finance, administration, informatics, etc. The role of chancellor and the aim of its introduction were clear. Therefore, it was unexpected when one a year later, the government established the legal institution of the consistory. In this study, we try to explore consistory. As the explanation of government did not contain any information about the idea, we must look forward to several methods to recognise its character, tasks, and duties.

Before we begin to research the legal institution of the consistory, it is compulsory to talk about the name. In Hungarian, the world "konzisztórium" is used, which sprung from the Latin world "consistorium." Either in the Hungarian organisations or the regulation in the close past, this world or the legal institution does and did not appear. We can find it in connection to some church organisation, but not to higher education. During the rule of queen Marie Theresa in the 18th century, the consistory was mentioned as a tool of the absolute monarch to control the Hungarian university's operation directly (Keczer 2009). Thus, it is strange, that the official Hungarian translation of the Act uses the word

„consistorium;"[42] however, the word cannot be found in Longman or Webster's dictionary, and the other dictionaries know only the world „consistory." So, we are using this latter therm.

As we mentioned above, the introduction of consistory was the second step in the process of the reorganisation of the Hungarian state HEIs' management. Because of the fact, that the chancellor's system secures the possibility of direct and indirect delimitation of autonomy for the government, the universities, experts and scientists as well reflected lively on it. Instead of the chancellor's legal institution, the literary background of consistory in Hungary is small: we can find only a few works (e.g., Bárány 2015, Keczer 2016, Kováts 2016, Veres & Golovics 2016, Rónay 2017, Rónay & Kováts 2018, Rónay 2018a) which focused rather on the introduction of the consistory . To increase our knowledge about consistory, we tried to answer the following questions:

- How should we describe the regulations regarding the consistory, and determine its characteristic?
- How can we classify its character?
- What kind of responsibility do its members have?
- Finally, what do the consistories in practice do, how can their operation influence the strategy and the daily life of HEIs?

During our investigation, we analyse the legal norms (the Act and the connecting Decree as well), made an international comparison between regulations and literature, lastly, we made an overview with the method of document analysis with the method of empirical research – mixed (qualitative and quantitative) method of document analysis, how the Hungarian consistories work in practice. In the first step, we researched how detailed the regulation is in acts and decrees in connection with consistory. After that, we tried to classify consistory with the help of standards like decision-maker, adviser, and supervisor. Finally, we analysed the content of state universities' websites concerning the information of consistories, e.g., list and CVs of members, decisions, regulations of working order. As this research was carried out before the general elections in Hungary, and the old-new government began the work with creating new bills including the modification of national higher education act, we were curious whether any changes can be recognised in connection with regulation and/or operation (transparency level) of the consistory. Therefore, we did control research. This study summarises these researches, offering a comparison of the two different periods.

[42]http://www.mab.hu/web/doc/hac/regulations/Nftv_angol_2Sept2016_EMMI%20forditas.pdf

2. The Hungarian legal framework

If we want to study Hungarian regulations, we have to start with the Fundamental Law of Hungary. As the constitutions in general, the Hungarian one should guarantee the fundamental rights including academic freedom, the freedom of science and research, and the autonomy of HEIs. The speciality of the Hungarian constitutional regulation that it contains not only guarantees but in many cases the right to delimit them. We can mention many examples; the delimitation of academic freedom and autonomy is only one. According to the Article X section (3) of Fundamental Law, the higher education institutions shall be autonomous in terms of the content and the methods of research and teaching. If we read only this part of the text, we can stay calm; the guaranty is secured. However, if we go on in the sentence, we can meet the following: an Act shall regulate their (the HEIs') organisation. . This part of the norm is about the HEIs in general, but this opportunity served to delimit the autonomy of state HEIs first of all. This rule makes it possible to introduce the legal institution of chancellor and consistory. Nevertheless, there is more severe regulation in this section: The Government shall, within the framework of the Acts, lay down the rules governing the management of public institutes of higher education and shall supervise their management. There are not many similar regulations in this Fundamental Law, and we cannot find similar among the EU member states' constitutions. Namely, this rule established the direct delimitation of autonomy and the possibility of indirect delimitation of academic freedom (including the freedom of science) by a decree (see detailed Rónay 2018b).

While the Fundamental Law makes possible the introduction of legal institutions like consistory, the NHE Act contains some details, in case of the consistory like tasks and members. The most detailed regulations are in connection with the membership of consistory. The consistory has five members: the rector and the chancellor are members ex officio. Excluding them, three further members are delegated by the ministry for five years. The NHE Act secures the right for several people: the Senate, the students' union, as well as the key organisations in the economic and social environment of the higher education institution, can propose members. Though, we cannot find any regulations which make it obligatory for the minister to choose a candidate from the proposed people. The Act declares that the members of consistory make their tasks without compensation. Moreover, the NHE Act contains rules of the cease of membership: when the term of appointment expires, the member dies, resigns or the minister recalls her or him.

The other detailed regulation is about the operation and tasks. In the case of operation, the consistory enjoys relatively high freedom. It has the right to make its own rules of operation. The Act determines only frames: the consistory must hold a session twice a year at least. For a quorum, at least three members must be present. Furthermore,

the NHE Act determines rules for the cases of consistory's disorders: when the consistory cannot secure the quorum again in the repeated meeting in fifteen days, or the members' number decreases under three.

The consistory needs data about the HEI to fulfil its tasks. Therefore, it has the right to inspect and request information about the work of the university. It is necessary, because the consistory takes part in establishing the senate's strategic decisions, and beside it favours and controls of economic activities of HEIs. The most important right of it is its prior consent, which means the Senate cannot decide on medium-term institutional development plan without the consent of consistory. This plan includes a strategy for research, development, and innovation, the budget, the annual accounts, the asset management plan of the higher education institution, and the establishment of business organisations and the acquisition of shares in business organisations. While the afore-mentioned Body in the Act of 2005 had a similar prior consent right, it was related to only financial matters. Furthermore, the majority of that Body's members were delegated by the Senate, and those members who were delegated by the Government stood in contractual connection to the HEIs. Because of the delegating process of Consistory and the greater size of the right for prior consent, the consistory is more powerful. Under these circumstances, it would be necessary to secure rights or guarantees for the Senate to make a balance between the two bodies. Given the fact that the Senate represents the common of the university, as the majority of its members are elected by the employers and students of the HEI. Instead of it, the Senate has right only to submit to the maintainer objections against the decisions of the consistory, or in the event of its failure to act.

If we talk about details established by legal norms, we must mention the Government Decree 87/2015 (IV. 9.) on the Execution of NHE Act. Although this Decree regulates the process of the proposition, appointment, incompatibility and professional confidentiality of members, it also regulates the obligation to justify decisions, and furthermore the publicity of decisions between the framework of regulations of HEI. It is necessary to emphasise that these rules contain only technical regulation. Based on these, we cannot conclude the aim and point of this legal institution.

To sum up the statutory instruments, we can identify the main problem with the regulation of consistory. Although the consistory has a key role in the operation of an HEI's, the number of regulations is low; these are mainly technical rules. Among them, there are many unclear essential matters, e.g., tasks and competencies, the legal relationship of the delegated members: whether they have liability or responsibility for their activities and decisions?

3. The methods of consistory's definition

3.1. Classifying by characteristics

Classifying the consistory is possible from several points of view. First of all, we can choose the authority. According to the law, the consistory purposes is to give guidance to strategic decision making and provides professional support for management activities, which tasks are typical of a consultant body. The next task is the oversight of management activities, which is supervisory character. And with the right for prior consent, the consistory takes part in decision-making processes, so we should call it decision-maker.

The other point of view for classifying is its place in the structure of management. In that case, it seems we are on the easier way because the members (except for the rector) are connecting directly to the government. Chancellors are appointed by the prime minister, as we mentioned above, and the minister delegates the three members. In the case of two members (the rector and the chancellor), the minister exercises the employer's rights. The secure connection to the maintainer (the state and the government as well) is visible.

Regarding this character, we should declare that the consistory is a government body, which has a place out of the HEI's organisation. Nevertheless, if we declare it, we are wrong. Namely, the Act handles and regulates the members as an institutional officer. According to the regulation, and because of the willing of the legislator, the consistory is inside of the HEI's organisation.

Finally, we can investigate the legal status of the members. In the case of the rector and the chancellor, the status is clear. Both are public servant. Therefore, they have an employer, which is, according to the NHE Act, is the HEI. As we mentioned afore, the minister exercises the employer's rights. Hence their liability and responsibility are obvious; the act regulates them on the legal status of public servants, the Labour Code, and the Civil Code. However, the legal status of the delegated members is under-regulated; therefore, we can declare only the facts, what they are not. They cannot be government officials, so they do not have an employment relationship, and they do not have a contract of agency. The legal relationship of these members is unclear, thus both their liability and responsibility.

3.2. International comparison

If we want to understand the consistory by international comparison, it is necessary to choose the German and the Anglo-Saxon sample. The relevance of the first is based on the fact that the Hungarian government regularly cited the so-called German model. We consider that it is wrong. Higher education is regulated in Germany by the States. The

federal regulation offers only brief framework rules. The state regulations are different; we can find several solutions.

Although we can identify the typical body, which is in German „das Kuratorium" (which can be called in English as the board of trustees), there are many differences between each model. In several states, several bodies have different authorities, and the election processes are also different. Nevertheless, the Kuratorium, in general, has some similarities to Hungarian model of the consistory. However, these bodies aim first of all to be an interface between the HEI and the government as well as the business and industrial sphere (Nolden, 2011, Von Coelln, 2011).

Comparing the main characters of these bodies in Germany and Hungary, we can draw the following conclusions. There is a similarity between them in Germany and Hungary if we consider the connection of consistory with the environment. In Germany, the members are people with practice from business or special fields connecting to the HEI, in Hungary, the members are proposed partly by the key organisations in the economic and social environment of the HEI. The next similarity is in connection with the role these organisations to offer expertise for the HEIs. Therefore, it is not surprising that the consultant role appears in the regulations of several German States and Hungary as well. In Germany, it means the securing expertise for the council of HEI, in Hungary the guidance to strategic decision making, and professional support.

Except for one (and later mentionable) element of their authority, further similarity cannot be found. The more spectacular dissimilarity is the decision about members. In Germany, the HEI always has a definite role in this process. In some cases, it is the decision-maker; in others, the election is done with the HEI together. For instance, in North Rhine-Westphalia, the members are elected regarding the opinion of the rector, chancellor and the representative of the community. In Lower Saxony, the members are elected by a board consists of an equal number of representatives of both HEI and state (Burgi & Gräf, Battis, 2009). The exception is Hamburg, where the city and the state appoint the members. This construction exists in Hungary too, but here the proposal of HEI is not obligatory.

In case of some states in Germany rare and special rights also appear: e.g., in Hessen veto right in business and investment matters; or in Freien Universität, Berlin the participation in financial and personnel decisions. Although it is similar to Hungarian consistories' prior consent in budget and the establishment of business organisations as well as the acquisition of shares in business organisations, but in Germany never touches upon educational and scientific matters directly (Gross, 1999), contrary to the Hungarian consistory which has prior consent in development plan for research, development and innovation.

The other relevant sample is the Anglo-Saxon one. On the one hand, the board („board of trustees" or „board of regents") is almost originally the part of the university management. On the other hand, this kind of body exists for a longer time and collaborates with the management well-organised (Kaplin & Lee, 2013). Furthermore, in the history of Hungarian regulation, it has always been planned to introduce a board similar to it (e.g., governing board in 2005).

If we try to define the board type bodies regarding their main characters, we can recognize, that they have an operative function with managerial tasks (of a certain kind of board of directors). The „chief executive officer" („president" or „chancellor") is working directly above the board. It shows a clear role, and also the result of it: the body is involved in reaching the goals of the university. It means, they represent, save and secure the institutional interests; control the operation regarding national regulations; acceptance of strategic documents, enforcement of accountability (Keczer, 2016). This kind of role suits the typology of „company" boards (the one-tier board and the two-tier board). By the one-tier board, the operative and control functions merge into one. In the case of a two-tier board: these control functions work separately (Lederer, 2006).

Summarizing the classifying and international comparison, we can declare that the consistory is different from all samples. It is like a board in the different characters of the samples are mixed. The consistory does not have a precise aim and function, and position in the managerial structure. A well-defined liability and responsibility of the members are also missing.

4. A practice: the realization of the Hungarian consistories

Neither classifying nor comparison affected the expected results, so, we decided to investigate the consistory closer, in practice. Therefore, we researched in the spring of 2018, and half a year later, we repeated it. We used empirical, mixed (qualitative and quantitative) document analysis of the web pages of state HEIs (except the National University of Public Service, where neither chancellor nor consistory work). We studied the 27 Hungarian state HEIs (26 universities and one college) on the ground the following typology of their website:

- whether the fact of consistory's existence on the website;
- are the CV-s of members available on the website?;
- are the decisions made by the consistory available on the website?;
- is there their own regulation on the website?

To summarize, we researched the transparency of consistory (and with it indirectly of the university). Every single information which was available was marked with "+". The non-available information – including when the information is on the website but protected by password – was handled as non-public and was marked with "0".

To study the websites directly and investigate the universities' transparency was necessary because the government does not publish valid data on this topic. Although there is a table on the government's website (without date), which contains data of state HEIs' consistory: name, current position and the proposed organisation of each member of consistories, but without the date of publishing we can suppose, it is already not in force.[43]

The other aspect on which we assessed the transparency was the quality of availability, which means in our context, how many steps are needed to find information about consistory. When the information was available in

- 2 steps at the most, we assessed it with mark 1;
- 3 steps, we assessed it with mark 2
- 4 steps, we assessed it with mark 3
- 5 steps, we assessed it with mark 4
- more than 5 steps; we assessed it with mark 5

When the consistory or one of its information was not available, we marked it with "n.c." (not be construed).

Our analysis was made first between January and March of 2018, and it was repeated in October and November of 2018. The results of the analysis are collected in Table 1 and Table 2. The comparison of the two analysis and its evaluation is in the next Chapter (Findings)

[43]http://www.kormany.hu/download/6/7b/90000/Konziszt%C3%B3riumok%20list%C3%A1ja.pdf

Table 1 Summary of original research (01-03.2018)

Higher Education Institutions[44]	***Website***	***CV***	***Decisions***	***Regulations***	***Availability***	***Number of Data***
Állatorvostudományi Egyetem (University of Veterinary Medicine Budapest)	0	0	0	0	n.c.[45]	
Budapesti Corvinus Egyetem (Corvinus University of Budapest)	+	-	+	+	**5**	***3 at the most***
Budapesti Műszaki és Gazdaságtudományi Egyetem (Budapest University of Technology and Economics)	0 pw[46]	0 pw	0 pw	0 pw	n.c.	
Debreceni Egyetem (University of Debrecen)	+	0	0 pw	+	1	***2 at the most***
Eötvös Loránd Tudományegyetem (Eötvös Loránd University)	+	+ **(2/3)**	0 pw **(2016)**	0	1	***2 at the most***
Kaposvári Egyetem (Kaposvár University)	+	0	0	0	1	
Liszt Ferenc Zeneművészeti Egyetem (Liszt Academy)	+	0	0	0	**3**	
Magyar Képzőművészeti Egyetem (The Hungarian University of Fine Arts)	0	0	0	0	n.c.	
Magyar Táncművészeti Egyetem (Hungarian Dance Academy)	+	+	+	+	1	***all***
Miskolci Egyetem (University of Miskolc)	+	0	0	+	1	
Moholy-Nagy Művészeti Egyetem (Moholy-Nagy University of Art and Design Budapest)	+	+	+	0	1	***3 at the most***
Óbudai Egyetem (Óbuda University)	+	0	0	0	1	
Pannon Egyetem (University of Pannonia)	0	0	0	0	n.c.	
Pécsi Tudományegyetem (University of Pécs)	0	0	0	0	n.c.	
Semmelweis Egyetem (Semmelweis University)	+	0	0	+	1	***2 at the most***
Soproni Egyetem (University of Sopron)	0	0	0	0	n.c.	
Szegedi Tudományegyetem (University of Szeged)	0	0	0	0	n.c.	
Szent István Egyetem (Szent István University)	0	0	0	0	n.c.	

[44] HEIs where data was available are marked with grey colour
[45] not be construed
[46] protected by password

Higher Education Institutions[44]	***Website***	***CV***	***Decisions***	***Regulations***	***Availability***	***Number of Data***
Széchenyi István Egyetem (Széchenyi István University)	0	0	0 **(2016 search tool)**	0	n.c.	
Színház- és Filmművészeti Egyetem (University of Theatre and Film Arts Budapest)	+	0	0	0	**2**	
Testnevelési Egyetem (University of Physical Education)	0	0	0	0	n.c.	
Budapesti Gazdasági Egyetem (Budapest Business School)	+	0	0	0	1	
Dunaújvárosi Egyetem (University of Dunaújváros)	0	0	0	+ **(search tool)**	**4**	
Eszterházy Károly Egyetem (Eszterházy Károly University)	+	0	0	0	1	
Neumann János Egyetem (John von Neumann University)	+	0	+	+ **(soon)**	1	***3 at the most***
Nyíregyházi Egyetem (University of Nyíregyháza)	+	0	0	0	**2**	
Eötvös József Főiskola (Eötvös József College)	0	0	0	0	n.c.	

Table 2 Summary of control research (10-11.2018)

Higher Education Institutions[47]	***Website***	***CV***	***Decisions***	***Regulations***	***Availability***	***Number of Data***
Állatorvostudományi Egyetem (University of Veterinary Medicine Budapest)	0	0	0	0	n.c.	
Budapesti Corvinus Egyetem (Corvinus University of Budapest)	+	-	+ **(until 04.2017)**	+	**5**	***3 at the most***
Budapesti Műszaki és Gazdaságtudományi Egyetem (Budapest University of Technology and Economics)	0 pw	0 pw	0 pw	0 pw	n.c.	
Debreceni Egyetem (University of Debrecen)	+	0	0 pw	+	1	***2 at the most***
Eötvös Loránd Tudományegyetem (Eötvös Loránd University) ▼	+	+ **(1/3)**	0 pw	0	1	***2 at the most***
Kaposvári Egyetem (Kaposvár University)	+	0	0	0	1	
Liszt Ferenc Zeneművészeti Egyetem (Liszt Academy) ▼	0	0	0	0	n.c.	
Magyar Képzőművészeti Egyetem (The Hungarian University of Fine Arts)	0	0	0	0	n.c.	

[47] HEIs where data was available are marked with grey colour

Higher Education Institutions[47]	*Website*	*CV*	*Decisions*	*Regulations*	*Availability*	*Number of Data*
Magyar Táncművészeti Egyetem (Hungarian Dance Academy)	+	+	**+ (only in 2016!)**	+	1	***all***
Miskolci Egyetem (University of Miskolc)	+	0	0	+	1	
Moholy-Nagy Művészeti Egyetem (Moholy-Nagy University of Art and Design Budapest)	+	+	+	0	1	***3 at the most***
Óbudai Egyetem (Óbuda University)	+	0	0	0	1	
Pannon Egyetem (University of Pannonia)	0	0	0	0	n.c.	
Pécsi Tudományegyetem (University of Pécs)	0	0	0	0	n.c.	
Semmelweis Egyetem (Semmelweis University) ▲	+	0	+	+	1	***3 at the most***
Soproni Egyetem (University of Sopron)	0	0	0	0	n.c.	
Szegedi Tudományegyetem (University of Szeged)	0	0	0	0	n.c.	
Szent István Egyetem (Szent István University)	0	0	0	0	n.c.	
Széchenyi István Egyetem (Széchenyi István University) ▼	0	0	0 **(nonthing in search tool)**	0	n.c.	
Színház- és Filmművészeti Egyetem (University of Theatre and Film Arts Budapest)	+	0	0	0	**2**	
Testnevelési Egyetem (University of Physical Education)	0	0	0	0	n.c.	
Budapesti Gazdasági Egyetem (Budapest Business School)	+	0	0	0	1	
Dunaújvárosi Egyetem (University of Dunaújváros) ▲	+ **(partly)**	0	0	**+(menu)**	**4**	
Eszterházy Károly Egyetem (Eszterházy Károly University)	+	0	0	0	1	
Neumann János Egyetem (John von Neumann University) *	+	0	**+ (until 2017)**	**+ (soon) !!!**	1	***3 at the most***
Nyíregyházi Egyetem (University of Nyíregyháza)	+	0	0	0	**2**	
Eötvös József Főiskola (Eötvös József College)	0	0	0	0	n.c.	

5. Findings

The rationale of repeating the comparison in such a short time was to get the answer to the question, whether anything has changed after the general elections in the year 2018 and the ministry's reorganization.

The original research showed that any kind of data but only one, which is mostly the list of consistory members' names) was available by 15 HEIs, which is little more than half of the state HEIs (55,55%). There were not any data (none information was in websites) by 12 HEIs. It means that the state institutions do not care about the consistory, the transparency, or they do not think that the consistory or information about it can be substantial. In connection with these latter ones necessary to remark, that there was one HEI, whose website contains probably lots of data, but the site is saved by password. In case of another HEI, the fact can be found via the searcher tool, and there were three HEIs, in which the consistory was only among news (once). More than 1 data (of course between these 15) was available by 7 HEIs: 2 data at the most by 3 HEIs, 3 data at the most by 3 HEIs, and all data was available only by 1 HEI.

The control research showed only little changes. Any kind of data but only 1 (mostly the list of members' names) is available by 15 HEIs. Although the number was not changed, one university disappeared, another got into the group. It means that no information is in websites by still 12 HEIs, (one of them the university which protected data with password). Although previously the fact of consistory can be found in the case of one HEI, this information today, already cannot be found. And from the ending time of the original research, the news of 3 HEIs already are not available either among archives. Analysing the HEIs, which publish more than 1 data (between these 15) can be found some interesting changes: instead, the previous three, 2 data at the most is available only by 1 HEI. 3 data at the most are available one more – 4 – HEIs. All data are available at the same one HEI, but it is necessary to mention that the decisions are not being refreshed.

Another approach to transparency is to investigate which content can be found on websites. According to the original research, on the website were available

- the consistory's members' list of names at 15 HEIs,
- the members' CV at 3 HEIs,
- the decisions at 4 HEIs (and in at 2 HEIs with protected by password),
- the regulations at 5 HEIs, (and in 1 HEI was reachable via searcher tool, and in another one the visitors were informed, that "it will be soon").

The control research showed a little change, because the members' list of names is available at with one less (14) HEIs, the members' CV also with one less (and an HEI uploaded only two members CV), the number of decisions did not change (still 4 HEIs; but in 3 cases the archives are not up to date, and 2 HEIs protect it by password). Fortunately, the number of regulations increased, although with only one (6 HEIs; and 1 HEI made it reachable only in the menu of a list of documents and regulations), The University which said, that the regulation „will be soon" available, have not uploaded it yet.

The research studied how easy the information is available. To assess it, we used scores from one to five, as we mentioned afore. 1 score (which means the information was available with 2 steps) got 11 HEIs, but among them were five, which published only the list of names, were three, which made available the CV too, four uploaded also the decisions, and only two the regulations. 2 scores (3 steps) got 1 HEI which uploaded the list of names, and none other. 3 scores (4 steps) got 1 HEI with the list of names again, 4 scores (5 steps) got 1 HEI which published only the fact of the existence of the consistory. At this point, we can suppose, that the level and amount of content have a connection to the availability, but surprisingly the 1 HEI which got the worst score (5), because the content was available with more than 5 steps, uploaded 3 data. The control research presented that the changes of availability not significant among the best score won HEIs, only the number of regulation publisher HEIs increased, from 2 to 4. The number of 2 scores HEIs changed to 2; every other data is the same.

6. Summary

From the evaluation of the research, including the comparison, we could declare, that not only the rules of regulations are incomplete, but there is no information, whether the higher education institutes have an idea what the consistory is, what the aim of its working is, and how should they handle it. If they have, there is not enough available information about HEIs which make clear how consistories work at HEIs, how they can support the work of university management. There is almost no information to study and analyse the operation of consistories. Our research was the first, which was dedicated to understand, and to explain this body. It shows us; this topic has been less enjoyable to be a subject of research until now. By analysing the data, we can announce, that the consistories' working can be characterized with the almost complete missing of the transparency. If an organisation's rights and obligations are underregulated, and it works by the lack of detailed regulation while it has strong power, it is more important to operate transparently. In this case, only the basic legal norms and legal framework can guarantee the rightful operation. Nevertheless, we can control its realisation when we can compare the real work to these

guarantees. Without transparency, it is impossible to determine the legitimacy of the operation of the consistory.

If we assess the differences between the two research periods, we can experience, that the difference does not have a connection to the election or the reorganise of government. Some changes (in 3 cases the measurement of information decreased, in 2 cases increased – „and soon is not really soon") is not significant. The connection between elections as well as government reorganization and transparency of consistory is not proofed, we can suppose, the transparency depends on the person of HEI management (rectors and/or chancellors).

The missing transparency among the introduced legal norms marks serious problems, either the legislation or the state universities' operation. Though, we have to mention a more serious problem, which characterizes the relationship between state government and universities, autonomy, and academic freedom. The unregulated, non-transparent operation without legal guarantees always makes possible the infringements of rights, in that case, the possibility of violating autonomy.

References

Bárány, V. F. (2015): A felsőoktatás-igazgatás rendszerének átalakítása Magyarországon. *Kodifikáció és Közigazgatás*, 4(1), 89−99.

Battis, U. (2009): Das Amt des Universitätskanzlers: Ein Auslandsmodell? *Die Öffentliche Verwaltung*, 62(13), 518–522.

Braukmann, M. (2004): Mangelnde demokratische Legitimation und funktionswidrige Organisationsstrukturen der niedersächsischen Stiftungsuniversitäten. *Juristenzeitung*, 59(13), 662−666.

Burgi, M. & Gräf, I. (2010): Das (Verwaltungs-)organisationsrecht der Hochschulen im Spiegel der neueren Gesetzgebung und Verfassungsrechtsprechung, *Deutsches Verwaltungsblatt*. 125(18), 1125–1134.

De Groof, J. Švec, J. and Neave, G. (1998): *Democracy and governance in higher education*, The Hague, London, Boston: Kluwer Law International

Gross, T. (1999): Das Kuratorium. Hochschulautonomie durch institutionalisierte Kooperation? *Die Öffentliche Verwaltung*, 52(21), 895−902.

Kaplin, W. A. & Lee, B. A. (2013): *The Law of Higher Education, Volume 1*, John Wiley & Sons inc, 2013

Keczer, G. (2009): A magyar felsőoktatás és az egyetemirányítás változásai az Osztrák-Magyar Monarchiában. *Közép-Európai Közlemények*, 2(2-3/4-5), 16–21.

Keczer, G. (2016): Variációk egy témára – az állami kontroll eszközei a felsőoktatásban. In: Kováts, G. (ed.): *A kancellári rendszer bevezetése a magyar felsőoktatásban. Tapasztalatok és várakozások*. Budapest: Budapesti Corvinus Egyetem, Nemzetközi Felsőoktatási Kutatások Központja, 58−84.

Kováts, Gergely (2016): Előszó. In: Kováts, G, (ed.): *A kancellári rendszer bevezetése a magyar felsőoktatásban. Tapasztalatok és várakozások*. Budapest: Budapesti Corvinus Egyetem, Nemzetközi Felsőoktatási Kutatások Központja, 5-6.

Lederer, P. (2006): A comparative analysis of the liability of non-executive directors in the UK and of members of the Supervisory Board in Germany. *European Business Law Review*, 6, 1575–1613.

Nolden, Frank (2011): Aufbau und Organisation der Hochschule. In: Nolden, Frank, Rottmann, Frank, Brinktrine, Ralf & Kurz, Achim (ed.): *Sächsisches Hochschulgesetz. Kommentar*. (pp. 345-446) Berlin, Berliner Wissenschafts-Verlag.

.Rónay, Z. (2017): *Egyéni és testületi felelősség a felsőoktatási intézmények vezetésében.* Doktori értekezés. Szeged: Szegedi Tudományegyetem

Rónay, Z. & Kováts, G. (2018): Ágazatirányítás 2008 és 2017 között. In: Kováts, G. & Temesi, J. (ed.), *A magyar felsőoktatás egy évtizede, 2008 – 2017.* (pp. 60–68). Budapest: Budapest Corvinus Egyetem, Nemzetközi Felsőoktatási Kutatások Központja.

Rónay, Z. (2018a): Centralizations and Autonomies: The Delimitation of Education by the Hungarian Government. In: Popov, N., Wolhuter, Ch., Smith, J. M., Hilton, G., Ogunleye, J., Achinewhu-Nworgu E. & Niemczyk, E. (ed.), *Education in Modern Society*, *BCES Conference Books, 2018, Volume 16.* (pp. 177–182). Sofia: Bulgarian Comparative Education Society

Rónay, Z. (2018b): Az intézményvezetés átalakulása. In: Kováts, G. & Temesi, J. (ed.), *A magyar felsőoktatás egy évtizede, 2008 – 2017*. (pp. 102–109). Budapest: Budapest Corvinus Egyetem, Nemzetközi Felsőoktatási Kutatások Központja.

Russo, C. J. (eds.) (2013): *Handbook of Comparative Higher Education Law*. Lanham, New York, Toronto, Plymouth: Rowman & Littlefield Education

Veres, P. & Golovics, J. (2016): Új szereplők a magyar felsőoktatásban: Kancellári rendszer és konzisztórium. In: Kováts, G. (ed.), *A kancellári rendszer bevezetése a magyar felsőoktatásban. Tapasztalatok és várakozások*. (pp. 7–22). Budapest: Budapest Corvinus Egyetem, Nemzetközi Felsőoktatási Kutatások Központja.

Von Coelln, Christian (2011): Das Binnenrecht der Hochschule in, Hartmer, Michael és Detmer, Hubert (ed.): *Hochschulrecht: Ein Handbuch für die Praxis*. (pp. 283-330) Heidelberg, C.F. Müller Verlag.

May contain traces of knowledge-transfer. Academia-business collaboration in Hungary in the era of dual study programmes

Loretta HUSZÁK

Abstract

Universities and research institutions as „core elements of a region's intellectual infrastructure" (Lendel, 2008) can have a positive effect on regional economies. As Lendel (2008) stated, the effect differs depending on the scale of university-business collaboration strategies - the in this field, most active universities and research institutes have a stronger impact on their regional economies. In the present paper, we analyse the academia-business collaborations in Hungary. The paper attempts to measure the regional pattern of knowledge transfer and to explore the determinants of knowledge interaction between different fields of research and sectors of economic activity in Hungary. The analysis is based on a regional case study with a focus on various types of knowledge interactions between universities/research institutes and private firms in Hungary since 2014. A methodology of expert interviews and primer data analyses is used in order to identify determinants of academia-business collaborations. Accordingly, this study refers to a restrictive definition of knowledge transfer: it is a term used to encompass activities to support mutually beneficial collaborations between universities, businesses and (potentially) the public sector. (University of Cambridge, 2009) Overall the research reveals a multifaceted picture of still emerging (and potentially conflicting) dynamics around the introduction of dual study programmes that have the potential to reconfigure the role of universities in regional collaboration networks.

1. Introduction - Transfer of academic knowledge to business

According to Etzkowitz (2003), innovation frameworks are constantly evolving, while institutions keep their strong dominance in their original field of expertise. Technology transfer can be described as market pull or technology push. Technology transfer occurs as a result of market pull when a need or problem causes companies to seek federal technology. Technology push occurs when innovations or inventions are used to create new markets or consumer needs. (Lee, 1997)

The Triple Helix Model of innovation – while referring to a set of interactions between academia, industry and government, to foster technology transfer as well as economic and social development - mixed up the boundaries of the traditional basic roles of university, industry and government. This model of innovation was first proposed by Henry Etzkowitz and Loet Leydesdorff in the 1990s. As Etzkowitz (2003) stated, the driving force was the shift towards a knowledge-based society, which has given a bigger role to universities. Today, many higher education institutes put much emphasis on the continuous all-round development of their students through training and several other activities to make the students placeable. Skills have become an ever-increasing concern for public and private actors over the last two decades. In order to give hands-on experience of the corporate world, industrial training after or during the study year has been made a part of the curriculum in numerous universities.

Since the 2010s, universities have also been expected to increase their economic contributions - the emergence of the 'third mission'. (European Commission, 2017) Key priorities are the targeted use and transfer of academic knowledge to help resolve diverse economic and societal challenges; and the transfer of technologies and innovations in the form of cooperation with public and private enterprises. (Zuti, 2014) The last decades have witnessed a significant growth in the number of formal and informal R&D collaborations, several studies have documented the importance of networks for knowledge spillovers and the innovative performance of firms (Tomasello et al., 2017), showing that these networks are typically characterized by rise-and-fall dynamics; and dynamics is driven by multi-connectivity.

Hungary's higher education and research system has undergone political reforms since the late 1990s, responding to the EU innovation strategy (including smart specialisation strategies). Since 2004, the new framework of innovation policy in Hungary has put significant emphasis on the university-industry-government interactions in creating commercial, entrepreneurial spin-offs, or common industry-academia innovation projects, co-financed by all participating partners. By now, all components of the Triple Helix Model exist in Hungary: universities and research institutions are encouraged to work more closely with the private sector to enhance the relevance of their research and facilitate the

use of research results by the industry. These trends create a situation where academia is increasingly held accountable by the government for technology and knowledge transfer. (Gégény, 2015) In fact, universities have established organizations to commercialize the knowledge generated at the research institution level, to keep existing contacts or create new ones with the industry and to join networks. However, do they collaborate with local/regional partners? In which form does knowledge transfer occur between the higher education institutions and their collaborative business partners? The time has come for evaluating the performance of Hungarian universities and research institutions in technology and knowledge transfer.

The empirical material in the present paper is drawn from a regional investigation of institutional factors and practical elements affecting the knowledge transfer. The aim was to examine whether the universities and research institutions in the observed region (county-level) have intensified their collaboration with the industry in the past ten years, for the purposes of technological and scientific knowledge dissemination and exploitation, leading to the model of an „entrepreneurial university" (Fréesz, 2013). Our research questions were: 1) is knowledge/technology transfer part of universities' and research institutes' strategy; 2) what the patterns of knowledge-based cooperation of universities and research institutions with business are; 3) whether and to which extend local/regional small- and medium-sized companies are involved as regional cooperation partners. The analysis was conducted in one of the central and averagely developed Hungarian regions.

2. Is the Hungarian academia prepared for knowledge transfer?

Although the EU executive branch paves the way for the inclusion of an economic and social development mandate for universities (European Commission, 2017), due to differing legal systems, most Hungarian universities lag behind in their efficiency of technology transfer in comparison with other European or U.S. universities (JRC Science Hub, 2018). Hrubos and co-authors have found that the main obstacles for Hungarian universities to take more active roles in promoting the direct and active transfer of academic research is the strong decentralisation in their organisational structure and the relatively strong autonomy of the more or less independent faculties and departments. (Hrubos at al., 2004) Moreover, institutionalised academia-business cooperation will also be prevented through the fact that academic staff is often involved on a private base in entrepreneurial activities (and act, e.g. as scientific consultants). (Liber, 2016) As stated by Inzelt (1999), this phenomenon might prevent large-volume cooperation and research projects, institutionalised collaboration of university departments with industry representatives, or even have a negative impact on the increase and expansion of innovative small businesses. In the interpretation of Inzelt, the reasons of this phenomenon

might be as follows: underpayment of highly qualified academic staff; missing regulations concerning the financial participation of involved researchers or academic staff in the generated technology transfer incomes; and the underdeveloped motivation system for employees at universities. (Inzelt, 1999)

As first we examined whether publicly funded (budgetary) research institutions (PROs) and higher education institutes (HEIs) in Hungary have hitherto established mechanisms to commercialize the knowledge generated at the research institution level, with the goal to create new contacts or keep up existing relations with the industry and to join networks. With the Act LXXVI of 2014 on Scientific Research, Development and Innovation, Hungarian *PROs and HEIs became authorised to establish or acquire shares in commercialisation projects or companies*, provided that the "budgetary research organisations, public foundations and research organisations operating as public benefit non-profit business associations owned by the state or a local government have their own intellectual property management regulations". (Act LXXVI of 2014, Section 33) With the 2019 amendment of the act, on behalf of the state, intellectual property ownership rights will be exercised by the research and higher education institutes. HEI and PROs can decide about the exploitation and commercialisation of research results, in line with their internal IP policy.

In order to facilitate research and knowledge transfer, the research institutions and higher education institutes need to adopt strategic documents. This strategy identifies the key objectives which will inform and shape policy and operational planning. We know that university managements run the risk of experiencing a mismatch between ambition and resources if the goals are not measurable, staff incentives are missing, or other signs of attempts to efficiently operationalise the knowledge/technology transfer strategy. However, we believe that adopting a strategy document is a first and unavoidable step towards successful academia-business collaboration.

Table 1 Knowledge/technology transfer as part of a higher education institute's strategy

Name of institution	**Strategic document on technology transfer available?**
Kodolányi János University of Applied Sciences, Székesfehérvár Campus	yes
University of Dunaújváros	yes
Corvinus University of Budapest, Székesfehérvár Campus	yes (currently under review)
University of Óbuda, Alba Regia Technological Faculty, Székesfehérvár	yes

Name of institution	**Strategic document on technology transfer available?**
Szent György University Hospital, County Fejér, Székesfehérvár	yes
Centre for Agricultural Research, Hungarian Academy of Sciences	yes

Source: own depiction

As Table 1 states, in County Fejér collaboration in general and commercialisation of research results, in particular, belong to the strategies of all examined research institution and higher education institute. But still, knowledge commercialisation purposes and especially intellectual property (IP) rights are often viewed as something "complicated and controversial" (Interview 1). Effective IP management might help higher education institutions use their research products to benefit and to enter into academia-business collaborations. Without awareness of sophisticated knowledge transfer and IP management techniques, however, such efforts - and their benefits - will be almost impossible.

3. Patterns of knowledge-based cooperation of universities and research institutions with business

Collaboration is about mutual benefits, where a university or research institution contributes to a business at small or the society at large and vice versa, in a two-way relationship. As described in Chapter 1, knowledge transfer is the process by which technology or knowledge developed in one place or for one purpose is applied and exploited in another place for some other purpose. (Lee, 1997)

The second research question referred to the specific forms of academia-business collaboration in the examined region. The channels through which knowledge flows from PROs and HEIs to industry and business can happen has been analysed by a number of scholars (Bercovitz and Feldman, 2006; Fréesz, 2013; de Wit-de Vries, 2018) These channels include, but are not limited to,

- flows of fresh graduates to business,
- personal networks of academic and business staff,
- licencing and other agreements,
- spin-offs of new firms from universities (Lengyel, 2012; Bercovitz and Feldman, 2006)

Studies have identified several internal and external factors that facilitate the technology transfer and commercialisation process. (Kirby et al., 2011) The Innovation Union flagship initiative (European Commission, 2011) stressed the importance of developing mechanisms to strengthen knowledge/technology transfer offices (TTOs) in PROs and HEIs, in particular through business-academia collaboration. The explicit responsibility of TTOs is to formalize knowledge transfer and to foster the collaboration between industry and science (Huyghe, Knockaert, Piva et al. 2016).

Parallel to similar international trends (Huyghe, Knockaert, Piva et al., 2016), the most widely applied institutional framework model of knowledge transfer was 2008 and 2014 in Hungary the introduction of TTOs, operating in each analysed institution. TTOs were established to foster the transformation of basic or applied research in academia with a commercial value into commercial goods. (Buzás, 2002) One of the aims of TTOs was to create some revenue for the universities and research institutions, thus enhancing its role as an economic actor. However, the average profitability of TTOs remained very low in Hungary. (Buzás, 2002)

Since 2015, a new approach to technology and knowledge transfer can be observed in Hungary. After preparatory work in 2015 and 2016, in 2017 five Centres for Higher Education and Industrial Cooperation (FIEK) were established in Hungary, in university cities outside of Budapest and the Central Hungarian region (in Győr, Kaposvár, Miskolc, Kecskemét and Debrecen). In addition, three other consortia in the Central Hungarian region received funding in 2017 (Budapest University of Technology and Economics, ELTE University, and Szent István University in Gödöllő). The main objective of these centres is to adapt university research programmes in applied sciences and innovation to the industrial needs and to formulate long-term, business-based cooperation between the university and industrial partners. (JRC Science Hub, 2018) However, in 2018, 64 state-accredited institutions of higher educations and 125 publicly funded (budgetary) research institutions were operating in Hungary (Oktatási Hivatal, 2018). Consequently, in the majority of the Hungarian HEIs and PROs do not exist dedicated technology transfer centres.

What we can observe at HEIs, is the diffusion of teaching-based collaboration with industry and business partners, embedded into the so-called dual system of higher education /training. As it was stated by most interview partners, *since 2015 the focus of university-business cooperation is primarily on education and training, with technology and knowledge transfer as an expected long-term outcome* (Interview 1, 2, 3 and 4), illustrated in Table 2. Since PROs are not involved in the dual training system, their engagement in the exploitation of innovative research results remained active through traditional technology transfer networks (Interview 5 and 6).

Table 2 Organisational framework and type of academia-business collaborations

Name of institution	Organ. framework of collaboration	R&D cooperations	Teaching cooperation
Kodolányi János University	Internal, non-profit model (TTO 2002-2017)	Less typical	Rather typical
University of Dunaújváros	External model (headed by vice rector of research)	Less typical, but traceable	Rather typical
Corvinus University of Budapest	Internal model (headed by vice rector of research)	Less typical	Rather typical
University of Óbuda	Internal model (headed by the vice dean of research)	Less typical	Rather typical
Szent György University Hospital	Internal model (headed by the medical director)	Typical	Typical
Centre for Agricultural Research	Mixed model: spin-off companies and internal services offered to external partners	Typical	Less typical

Source: own depiction

4. Dual study programmes in Hungary: "dual approach" as a magic bullet?

The so-called dual training or dual study system has its origin in Germany. A dual study programme combines academic studies with experience in a company and vocational training. On dual study programmes, practical experience is a component of the degree programme. Students enrolled in dual study programmes must sign a contract with a company. The training then usually takes place at two separate locations: on the company's premises and at the higher education institution. (DAAD, 2017) Germany is a central example of this trend. The country has long been referred to as distinct ideal type and role model for skill formation and related educational policies (Clark, 1983; Thelen, 2004) In Germany, the expansion of the dual study programmes has led to an increasing differentiation of the German higher education landscape in the relevant subject areas. (Graf, 2017) Dual study programmes are mainly offered in economics, engineering, and computer sciences, but also health and social care. The providers, next to the employers that offer the workplace training, are primarily universities of applied sciences (59%), vocational academies (15%), and the Cooperative University of Baden-Württemberg (20%). In addition, some traditional research universities offer such programmes (6%) (BIBB, 2014, p. 28ff). In the abovementioned subject areas, dual-study programmes

already represent a sizeable proportion of the relevant student groups. (Graf, 2017) E.g. in Baden-Wuerttemberg – where these programmes were first established – according to the oral information of the president of the Cooperative University of Baden-Württemberg[48], about 10% of college students are today enrolled in dual-study programmes.

The specific form of a dual study programme is mainly determined within a negotiation process between the university and the collaborating company, which is supported by German universities far-reaching autonomy concerning teaching and research in most fields of study (German Basic Law, article 5 paragraph 3; Graf, 2017). The state (in German context the regional government responsible for education) typically exercises only an indirect control function via the accreditation agencies for higher education programmes. (Graf, 2017) The current expansion of dual study programmes is seen as driven from the bottom up by regional companies that cooperate with higher education institutions and are interested in innovative degree programmes. (Jahn, 1999) In other words, companies have realized that a dual study programme is an efficient way to recruit students. As discussed earlier, flows of fresh graduates to business is an outward form of knowledge transfer. (Lengyel, 2012; Bercovitz and Feldman, 2006)

Since 2014 it is the explicit aim of the Hungarian government to make education better match the needs of the labour market.[49] One of the key aspects is the closer cooperation between educational institutions and local companies. Baseline of the Hungarian government's concept are considerations that regarding the shifts in the labour market, structural changes towards a "dual" model in higher education, similar to the basic principles of the German Vocational Education Training System, could make the knowledge of graduates fit better the needs of the future employers and keep up better with the challenges of the modern world economy. [50] (Graf, 2013; Dötsch, 2015)

However, to date policy-makers in Hungary still seem to lack a thorough conceptual understanding of the complex multi-actor constellations that have emerged in the wake of the growing relevance of dual higher education programmes. In Germany, these programmes originally arose from the bottom-up initiative of employers and (regional) higher education organizations (mainly universities of applied sciences or 'Fachhochschulen', called in German) at the subnational level, often further driven by strong student demand. (Graf, 2017) The providers of dual study programmes are primarily universities of applied sciences (59%), and only some traditional research universities offer

[48] Prof. Arnold van Zyl at the 2nd Danube Conference for Higher Education Management 'In search of excellence in higher education', November 22-23, 2018, Budapest, Hungary.
[49] „The industry-oriented higher education is no longer just a dream", Hungarian innovation minister László Palkovics in an interview in 2015. (Gégény, 2015)
[50] According to recent reports of the World Economic Forum, Hungary is in the transition stage from an efficiency-driven economy to an innovation-driven economy, see WEF, 2018.

such programmes (6%). (Graf, 2017) In Hungary, dual study programmes are to be introduced at *all* level of higher education, independently from the applied profile of the institutions. In 2015, the newly established Hungarian Council for Dual Education accepted applications of 21 institutions of higher education, which submitted proposals for 30 different types of bachelor's degrees. In 2018, 40 different dual study programs at BSc and 32 at MSc level were available for future students, in the following academic areas: agricultural sciences, management studies, informatics, technical sciences, social sciences, and natural sciences. (Felvi, 2018) Only a few higher education institutions with the above listed academic profile do *not* offer dual study programmes.

5. Dual study programmes and academia-business collaborations in County Fejér

As a consequence of the above described, we can observe in Hungary the proliferation of dual (work-based) higher education programmes, the so-called dual or collaborative study programmes. In this chapter, we aim to analyse in detail the experience of Hungarian higher education institutes with the dual study programmes. For data collection purposes, the collaboration of the Corvinus University of Budapest (CUB), campus Székesfehérvár were further examined. At this university location, CUB offers dual bachelor study programs in cooperation with business partners in five different areas (see Table 3).

Table 3 Corvinus University of Budapest, Székesfehérvár campus, dual education, location of partners (2018/2019)

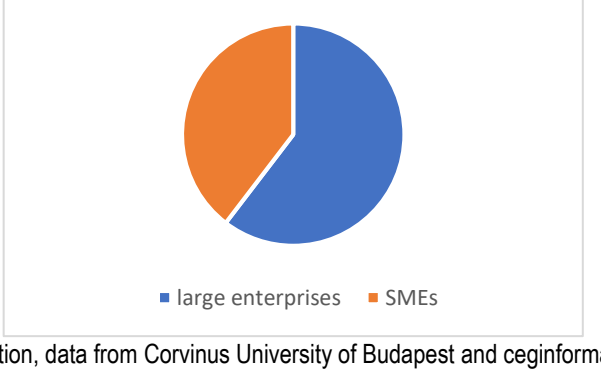
Name of the degree program	Degree level	Nr of dual partners, 2018/2019	Location of partners
Supply-chain management	Masters	11	All in Budapest, or in regions in Hungary (not in county Fejér)
Business and management	Bachelor	11	9 in County Fejér, 2 multinationals, but with branches in County Fejér
Sports economy	Masters	9	4 in County Fejér, 5 in Budapest
Finances and Accounting	Bachelor	13	All in Budapest
Tourism and Catering	Bachelor	4	All in County Fejér

Source: own depiction, data from Corvinus University of Budapest

The Corvinus University of Budapest has an excellent reputation both nationally and internationally. It hosts more than 10,000 students at its 3 faculties, offering degrees at undergraduate, graduate, postgraduate and PhD level in numerous specialisations taught in Hungarian, English or German.

Compared to the total number of students of CUB (in the academic year 2015/16: 10.948, Corvinus University of Budapest, 2018), the number of currently in dual study programmes enrolled students is relatively low: in the academic year 2018/19 in total 70 students were enrolled into dual programmes, at campus Székesfehérvár 48 students participated in such study programmes. (Interview 1, with further internal statistical data). At the Székesfehérvár campus, most students (22) were enrolled within the study program Business and management, on bachelor level. Collaborating companies have signalised that they had the capacity for around 150 students (see Figure 2).

Figure 2 Corvinus University, dual education, number of study places at affiliated partner companies, size of companies, academic year 2018/19

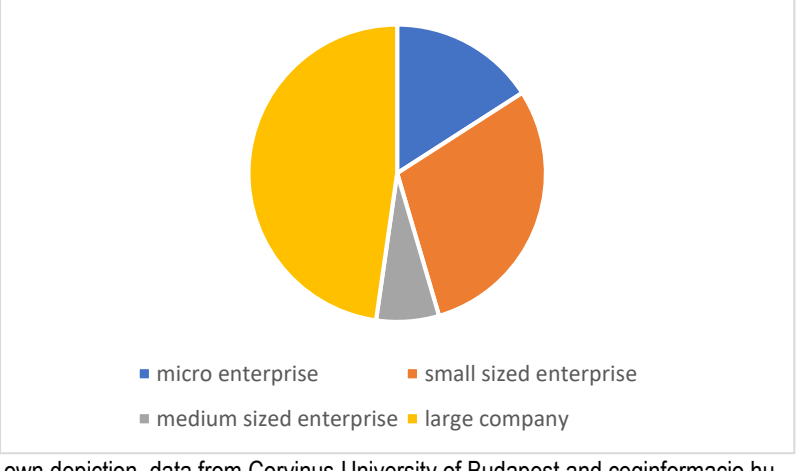


Source: own depiction, data from Corvinus University of Budapest and ceginformacio.hu

However, finding and convincing collaboration partners for the dual study programmes was quite a challenge for the university, especially with those collaboration partners who can only offer training place for a few students (Interview 5). The negotiation process with smaller companies is time-consuming and give rise to increased transactional costs (Interview 1). Indeed, dual study programmes call into question the cooperation capacity of the mid-sized business sector. The partner companies have divers' characteristics. In order to incorporate more small and medium-sized companies in the emerging system of dual studies, the Hungarian Ministry of Human Capacities elaborated a network of "dual studies centres" to give support to new partners. (EMMI, 2018) Especially for smaller companies, it is often too complex and expensive to enter into and

internally implement such a training programme. Having analysed the size of the collaboration partners, the research shows following results, visualised in Figure 3: 48% of all cooperating companies were large enterprises, 52% belonged into the small- and medium-sized enterprise category (incl. micro enterprises).

Figure 3 Corvinus University, size of collaboration partners, dual education

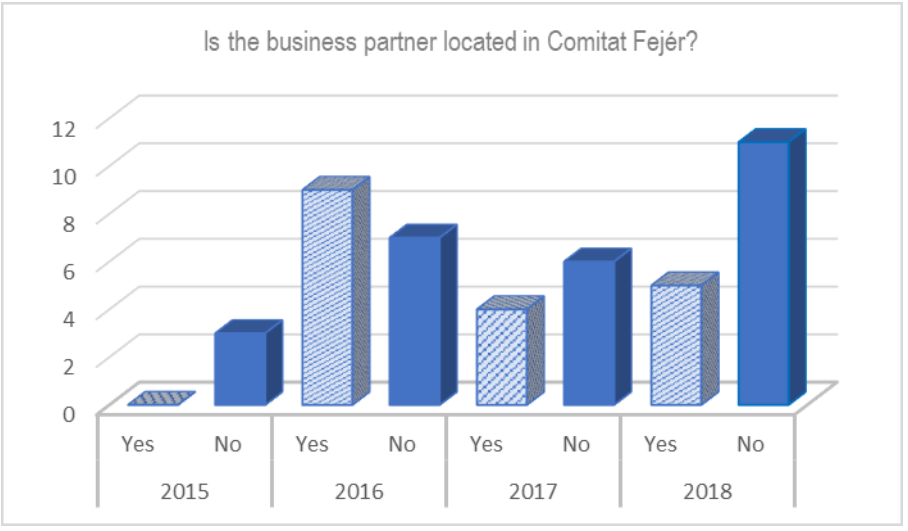


Source: own depiction, data from Corvinus University of Budapest and ceginformacio.hu

Conversely, large companies seem to be more relevant for universities than small ones and may therefore tend to exert strong influence on the design of the curricula in some cases (see the example of John von Neumann University in Kecskemét, established 2016 with the merger of the Colleges of Kecskemét and Szolnok, under the extremely strong cooperation with Mercedes-Benz Manufacturing Hungary Kft.). Therefore, the robust influence of individual companies on the design of specific dual study programmes can risk the holistic quality of the academic components of the study programme, thus favouring firm-specific content (Interview 1).

We also analysed where the collaboration partners are located. Currently (January 2019) the Corvinus University of Budapest has 44 contracted collaboration partners within the dual education in Székesfehérvár. As Figure 4 illustrates, 60% of the business partners have their registered office not in the county, with an upward tendency for more collaboration partners from outside of the small region.

Figure 4 Corvinus University, collaboration partners, dual education, location of partners



Source: own depiction, data from Corvinus University of Budapest and ceginformacio.hu

As the dual system requires a considerable administrative commitment from the higher education institutes, it seems to contribute to a reassessment of academia-industry/business collaborations, with an increasingly peripheral interest in research result commercialisation on the part of the universities. (Interview 1, 2, 3 and 4)

6. Summary

„Universities are a critical 'asset' of the regions, mainly in the less developed regions where the private sector may be weak or relatively small, with low levels of research and development activity." (JRC Science Hub, 2013, p. 83). Universities and research institutions can become central interfaces for regional technology transfer – this is what many governments and the European Commission expect of them. (European Commission, 2017) The role of academia in knowledge transfer is crucial. However, the impact of new strategies in the knowledge transfer has not yet received much critical attention in academic literature. This paper articulates these tensions and explores how and whether Hungarian academia exploits its technological knowledge and know-how in practice and makes up collaborative projects with local or regional firms that help reveal information about the future value of certain specialisations.

In the empirical part of the paper, we concentrated on Hungary. The applied research questions were as follows: 1) how far regional academia is prepared for knowledge transfer, 2) what the regional patterns of knowledge-based cooperation of universities and research institutions with business are and 3) how intensive the collaboration of academia with the regional industry is, especially within the framework of dual study programmes. In addition to succinct desk-research, expert interviews were conducted with university staff members.

Overall the research reveals a multifaceted picture of still emerging (and potentially conflicting) dynamics around the shift in university and research knowledge transfer since 2015 from the framework of TTOs towards the introduction of dual study programmes. The forced introduction of dual study programmes has the potential to reconfigure the role of universities in regional innovation networks. The Hungarian innovation policy is guided by German patterns and refers explicitly to the model of dual study degree programs. Knowledge and technology transfer are not as focused at the higher education institutes as they were between 2008 and 2014 when TTOs operated in each analysed university. Today, technology transfer, including the formulation of long-term, business-based cooperation between the university and industrial partners, is mainly limited to five plus three FIEK institutions. The analysed Hungarian universities and research institutes receive only limited public support for knowledge transfer activities and – to a great extent - had to give up their former TTOs. They concentrate the resources on the implementation of dual study programmes; other options of business-academia collaboration (e.g. with focus on research) remain increasingly unnoticed.

The positive effect of excellence cooperation programmes like FIEK is that at least when cooperating with these few preselected institutions, the business might get access to the knowledge-base of HEIs and PROs in a structured, professional and (hopefully) sustainable way. We hope that these collaborations will have long life-span to foster the achievement of significant results and will serve as a benchmark for other HEIs and PROs in Hungary.

Notes

Analysed publicly funded (budgetary) research institutions (PROs) and higher education institutes (HEIs):

- Corvinus University of Budapest (with a campus in Székesfehérvár)
- Óbuda University Alba Regia Technical Faculty
- University of Dunaújváros

- Kodolányi János University of Applied Sciences
- Centre for Agricultural Research, Hungarian Academy of Sciences

Interviews:

- Interview Nr 1: 11 June 2018 (via Skype);
- Interview Nr 2: 12 July 2018 (via phone);
- Interview Nr 3: 13 July 2018 (in person, Székesfehérvár);
- Interview Nr 4: 13 July 2018 (via phone);
- Interview Nr 5: 3 September 2018 (in person, Budapest)

References

Bercovitz, J; Feldman M. (2006): Entrepreneurial Universities and Technology Transfer: A Conceptual Framework for Understanding Knowledge-Based Economic Development. In: *The Journal of Technology Transfer*, 31(1), pp. 175-188.

BIBB - Bundesinstitut für Berufsbildung (2014). *AusbildungPlus in Zahlen*. *Trends und Analysen 2013* [AusbildungPlus in numbers. Trends and analyses 2013], Bonn.

Buzás, N. (2002): Technológiatranszfer-szervezetek és szerepük az innovációs eredmények terjedésében. [Technology transfer organisations and their role in dissemination of innovation results.] In: Buzás, N., Lengyel, I. (eds.): *Ipari parkok fejlődési lehetőségei: regionális gazdaságfejlesztés, innovációs folyamatok és klaszterek*, pp. 93-108.

Clark, B. R. (1983). *The higher education system. Academic organization in cross-national perspective*, University of California Press, Berkeley.

Corvinus University of Budapest (2018): *Facts and figures*. Available at http://www.uni-corvinus.hu/index.php?id=44607 [Accessed 21 December 2018].

DAAD (2017): *Dual study programmes*. Available at https://www.daad.de/deutschland/nach-deutschland/angebote/en/57321-dual-study-programmes/ [Accessed 21 December 2018].

de Wit-de Vries, E.; Dolfsma, W.A.; van der Windt, H. J. et al. (2018): Knowledge transfer in university–industry research partnerships: a review, *The Journal of Technology Transfer*, 43(1), pp. 1-18.

Dötsch, J. (2015): Building a knowledge economy: Is Hungary turning the right screw? *Andrássy Working Paper Series*, No 34.

EMMI (2018): *Duális diploma*. [Dual study degree.] Available at http://dualisdiploma.hu/ [Accessed 21 December 2018].

European Commission (2011): *Europe 2020 Flagship Initiative Innovation Union*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a renewed EU agenda for higher education, {SEC(2010) 1161}, Brussels.

European Commission (2016*): Peer Review of the Hungarian Research and Innovation system*. Horizon 2020 Policy Support Facility, Brussels.

European Commission (2017): *A Renewed EU Agenda for Higher Education.* Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on, {SWD(2017) 164 final}, Burssels.

Felvi (2018): Dual study programmes, list of cooperation partners. Available at https://www.felvi.hu/felveteli/dualisdiploma/partnerszervezetek [Accessed 21 December 2018]

Freész, G. (2013): Az egyetemi technológiatranszfer szerepe az innovációs folyamatokban [The role of university technology transfer in innovation processes], *Köz-gazdaság*, 8(2), pp. 103-117.

Gégény, I. (2015): *Palkovics László: nem álom az iparbarát felsőoktatás*. [László Palkovics: The industry-oriented higher education is no longer just a dream.] https://autopro.hu/techtogether/Palkovics-Laszlo-nem-alom-az-iparbarat-felsooktatas/16245/ [Accessed 21 January 2019].

Graf, L. (2017) Work-based higher education programmes in Germany and the US: Comparing multi-actor corporatist governance in higher education, *Policy and Society*, 36(1), pp. 89-108.

Hrubos, I., Polónyi, I., Szentannai, Á., Veroszta, Zs. (2004): *A gazdálkodó egyetem*. [The entrepreneurial university.] Új Mandátum, Budapest.

Hungarian Parliament (2014): *Act LXXVI of 2014 on Scientific Research, Development and Innovation*. Budapest.

Huyghe, A., Knockaert, M., Piva, E. et al. (2016) Are researchers deliberately bypassing the technology transfer office? An analysis of TTO awareness, *Small Business Economics,* 47(3), pp 589–607.

Jahn, H. (1999). Dualisierung und Modularisierung der Fachhochschulstudiengänge. [Dualisation and modularisation of degree programmes] In: Gützkow, F. Köhler, G. (eds.): *Differenzierung, Durchlässigkeit und Kooperation*, Frankfurt a.M., pp. 17–34.

JRC Science Hub (2013). *Universities and Smart Specialisation*. Available at http://s3platform.jrc.ec.europa.eu/documents/20182/115084/JRC85508_Universities_and_S3.pdf/23a84c8b-233f-4cee-aae9-c89914f23e9c [Accessed 21 December 2018].

JRC Science Hub (2018). *RIO Country Report 2017: Hungary*, Luxembourg, Publications Office of the European Union.

Kirby, D. A.; Guerrero, M.; Urbano, D. (2011). Making universities more entrepreneurial: Development of a model. *Canadian Journal of Administrative Sciences, 28*(3), pp. 302–316.

Lee, Y.S. (1997): *Technology Transfer and Public Policy*, Quorum Books, London.

Oktatási Hivatal (2018). *Államilag elismert felsőoktatási intézmények* [State-accredited institutions of higher education] Available at https://www.oktatas.hu/felsooktatas/kozerdeku_adatok/felsooktatasi_adatok_kozzetetele/felsooktatasi_intezmenyek/allamilag_elismert_felsookt_int [Accessed 21 December 2018].

SZTE Kutatás-fejlesztési és Innovációs Igazgatóság (2019): *Összefoglaló a tudományos kutatásról, fejlesztésről és innovációról szóló 2014. évi LXXVI. törvény módosításáról* [Compilation document on the amendments of Act LXXVI of 2014 on Scientific Research, Development and Innovation]. Szeged.

University of Cambridge (2009): *What is knowledge transfer?* Available at https://www.cam.ac.uk/research/news/what-is-knowledge-transfer [Accessed 21 December 2018].

World Economic Forum (2018): *The Global Competitiveness Index 2017-2018*. Available at http://www3.weforum.org/docs/GCR2017-2018/03CountryProfiles/Standalone2-pagerprofiles/WEF_GCI_2017_2018_Profile_Hungary.pdf [Accessed 21 December 2018].

Coping with paradoxes or how to construct a sustainable career in academia?

Andrea TOARNICZKY, Andrea JUHÁSZNÉ KLÉR, Zsuzsanna KUN, Éva VAJDA, Vanda HARMAT, Boglárka KOMÁROMI

Abstract

The aim of the study is to uncover how early career academics are coping with paradoxes encountered in their career. In order to answer our research question we did 23 narrative interviews with early career academics within a Hungarian Business School.

1. Introduction

The environment of the universities becomes more global, fast-paced and characterized by hyper-competitiveness (Edwards, Roy, 2017) and as internal structures and processes of the universities become more complex and dynamic, which also forces the phenomenon 'publish or perish' (Broadhurst, 2014). That leads to two distinct logics at universities, one is the logic of "science" (or professional), and the other is the logic of "profit" (or market/managerialism) (Schmidt, 2018; Alvesson, Spicer, 2016). These contrary expectations exist simultaneously and create underlying tensions.

It means a strong challenge for senior colleagues and even more for early career academics with less experience (Lee, 2014). There is also a global tendency that the number of PhD programs and degrees is growing, but the number of academic positions is limited. The career possibilities in higher education are transforming regarding the fact

that there are less tenure-track, fixed-term positions. The academic career seems to be as a long-term investment with high-risk in return.

Our narrative research aimed to investigate how these tensions appear among early career academics in a leading Hungarian business school and what kind of coping strategies are applied.

These tensions usually indicate that early career academics have to choose between the two opposing forces to favour one. However, this either/or approach seems to lead to suboptimal or dysfunctional solutions. The paradoxical approach can give the possibility not just to acknowledge but to meet contradictory demands simultaneously and to harness the synergy between them.

Regarding the structure of the paper, after the introduction part, a brief literature review of paradoxical tensions and coping strategies are introduced, followed by the research methodology. The empirical research results describe the paradoxical tensions of performing, belonging and organizing, that were most highlighted by the participants. In response to each paradox we uncovered three adaptive and one maladaptive coping strategy applied by respondents by highlighting when individuals seeking social support as a special coping resource.

2. Literature review

2.1. Paradoxes

The environment of the universities becomes more global and fast-paced, and as internal structures and processes of the universities become more complex and dynamic. This results in two different logics at higher education, one is the logic of “science” (or professional), and the other is the logic of “profit” (or market/managerialism) (Schmidt, 2018; Alvesson, Spicer, 2016). These conflicting expectations exist simultaneously and create underlying tensions in universities. Paradox perspective acknowledges these organizational tensions which are confronted and responded by academics on individual level day-to-day (Schmidt, 2018).

Paradox studies can help us to explore how early career academics can manage competing demands simultaneously in a broader context for long-term sustainability (Smith, Lewis, 2011).

Paradoxes are "contradictory yet interrelated elements (dualities) that exist simultaneously and persist over time" (Smith, Lewis, 2011, p. 387). The source of contradiction is that two forces are theoretically exclusive; however, practically still exist at the same time.

Paradoxes consist of two elements: underlying tensions between the opposing forces and the responses to them. Tensions mean that the forces seem logical as we consider them independently, but they are inconsistent and even absurd as they appear parallel. Responses by academic actors are iterations among strategies in order to manage tensions (Lewis, 2000).

Paradoxes might appear on the organizational, group and individual level (Lewis, 2000). An integrative categorization of paradoxes is applied in this study that was built on 20 years' (1989-2008) publications by Smith and Lewis (2011). This categorization classifies four types of paradoxes as belonging, performing, learning and organizing.

Learning paradox is generated from the knowledge and address the tension the following opposing forces: (1) the old and new, (2) exploration and exploitation. The first means that the prior knowledge is needed to create the future, but at the same time, the past must be destroyed for new ideas. The second pair of opposing forces includes that exploring is needed for long-term effectiveness while operations require optimization in the short-term meaning (Smith, 2014). Academic individuals experience learning paradoxes as they face with the dilemma of researching in the same field for years and exploiting existing network and knowledge or exploring new fields and build up new connections (Schmidt, 2018). Early career academics as new-actors still face the exploring phase by creating their academic network and exploring their scientific field to research.

Organizing paradox is stemmed from complex systems which create competing structures and processes. The opposing forces are (1) collaboration and competition (2) flexibility and control (Smith, Lewis, 2011). The first is also known as competition as working together is required besides conflicting interests (Raza-Ullah et al., 2014). The second is balancing between encouraging commitment and creativity while operating efficient and discipline (Lewis, 2000). Academic individuals are forced to be creative by the deadline, even though early career academics experience this tension, they rather eager to deliver all the requirements.

Performing paradox arises from the plurality of stakeholders and results in multiple and competing goals (Schmidt, 2018). Tensions emerge between (1) the demands of internal and external stakeholders. Tensions for individual academics are usually those between doing meaningful research and meeting the quantitative expectation (Butler, Spoelstra, 2014) and perform in multiple roles (Altbach, 2001; Billot, 2010). Performing paradox can cause more frustration at the early stage of the academic career since PhD students are not prepared for the challenge of meeting the expectations of being an

excellent student, an outstanding researcher and a good teacher simultaneously (Frick et al., 2016). PhD studies focus only on research skills, but they also need to supervise, teach, contribute to the faculty work or even organize the conference. The skills to fulfil other roles must be developed and also fulfil.

Belonging paradox has its origin in identity and has two contradictory forces between the individual and the collective needs (Smith, Lewis, 2011). Thus there is a tension between academic freedom and fulfilling multiple roles. In the academic context, one can feel torn between their institute, their profession, the disciplinary boundaries, and hierarchical groups as well (Schmidt, 2018). The actors follow self-driven goals as they try to fulfil the collective needs, as they have to balance between self-expression and collective affiliation (Pernicka, Lücking, 2012). Academia is known for flexible workplaces and freedom. This independence is the possible primary motivation for ECA for entering Higher Education (Frick et al. 2016). In contradictory early career, academics have to choose their individual focus, direction, tasks and duties while struggling to be accepted by their professional communities (Sutherland, 2017).

While experiencing academic paradoxes early career academics seem to be free to navigate between the two ends of a paradox (e.g. striving for self-expression and collective affiliation; doing important research and meeting the expectation of assessment; exploiting existing network and knowledge or exploring new fields and connections).

Table 1 below summarizes the four paradoxes according to their origin and opposing forces and the appearance for Academics and ECA.

Table 1. Summary of paradoxes in Academia

	Origin	**Opposing forces**	**Academics**	**ECA**
Learning	knowledge	old <=> new exploration <=> exploitation	exploit their existing network and knowledge or explore new fields and connections	still in the exploring phase
Organizing	complex systems	collaboration <=> competition flexibility <=> control	be creative by the deadline	eager to deliver all the requirements
Performing	plurality of stakeholders	opposing demands from different stakeholders	meaningful research or quantitative KPI's multiple roles (researcher, teacher, admin)	multiple roles (researcher, teacher, admin)
Belonging	identity	individual <=> collective	self-driven goals but collective need	choosing ind. focus and duties, while struggling to be accepted

Source: Own edition based on Smith and Lewis (2011), Schmidt (2018)

2.2. Managing paradoxical tensions in Academia

Academics struggle with the opposing forces, and they need to face with them day-by-day. Alvesson and Spicer (2016) discuss their coping from a critical approach. Regarding performance paradoxes, they pointed out that even if academics are supposed to value autonomy, and inherent conflict should be present between academic autonomy and managerialism, the latter has become increasingly dominant at universities. The authors raise critical concerns on how professionals have willingly surrendered their autonomy and complied with the demands of managerialism. Thus we may ask ourselves if the performance paradox is vanishing. However, this compliance is many times not straightforward; it is rather full of paradoxes and tensions such as compliance and resistance; love of academic work and cynical loathing of it being present simultaneously. To cope with these paradoxes, academics begin to see their work as a game which can be played cynically. Moreover, they have complied not just willingly, but even sometimes very enthusiastically. Academics started to play with power relations, stop think outside the game and avoid asking questions. Early career academics perceive the tensions and the cynicism as a response to that as they enter the symbolical gates of Academia.

Schmidt (2018) covers responses to the academic tensions in her explorative empirical research under the theoretical frame of Putnam et al. (2016), such as "either-or", "both-and", and "more than" approach. In the case of "either-or" approach, the opposing tensions are perceived as distinct phenomena that exist independently and simultaneously with each other. In contrast "both-and" approach the tensions can be seen as inseparable and interdependent, where individuals try to balance between opposing forces at different situations or different times. The third "more-than" approach focuses on options and tries to find the synergies of the opposing forces it can be explained like thinking and also playing "outside of the box". In the context of Austrian business universities, the first two approaches were dominant, while the third one was not significant for early career academics but the research indicates that "more than" approach still has potential in reframing and reflecting tensions.

Early career academics can make choices in the short term while remaining highly aware of accepting contradictions in the long term. These short-term allocations of time allow for long-term engagement with both opposing forces (Smith, Lewis, 2011).

2.3. Coping in literature

In response to the paradoxical tensions coping strategies are discussed in this paragraph. In this paper we apply the most commonly used definition of coping defined by Lazarus and Folkman (1984), that is individuals' "constantly changing cognitive and behavioural efforts to manage specific external and internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus, Folkman, 1984, p. 141). It is essential that coping is process-oriented, that means coping efforts can change over time, and they are contextually embedded (i.e., coping preferences can vary in different contexts) (Schoenmakers et al., 2015). Most often, people use a mixture of strategies to cope with stressful situations based on their individual preferences.

There are different classifications of coping strategies. In this paper two categorizations are covered: (1) approach of problem-focused and emotion-focused coping (Baker, Berenbaum 2007; Carver et al. 1989; Dysvik et al. 2005; Lazarus, Folkman 1984; Parker, Endler 1992; Pearlin, Schooler 1978); (2) approach of adaptive and maladaptive coping (Hampel, 2007).

(1) Problem-focused coping encompass all the active individual efforts to manage stressful situations and alter the person-environment relationship by modifying or eliminating the sources of stress. Emotion-focused coping contains all the regulative efforts to diminish the emotional consequences of stressful events (Folkman, Lazarus 1991). Both

in the case of problem-focused and emotion-focused coping seeking social support plays an important role.

Social support is considered a coping resource - a social "fund" containing emotional and material resources perceived by the individual from which people may draw when handling stressors, i.e. demanding and stressful circumstances (Cohen, 2004; Thoits 1995 in Nahum-Shani et al., 2011). Social support usually refers to the functions performed for the individual by significant others, such as family members, friends, and co-workers. Significant others can provide instrumental, informational, and/or emotional assistance (House et al., 1985).

(2) In the case of adaptive coping strategies, an individual reacts to events and situations constructively in a mature and healthy way. While in the case of maladaptive coping strategy, one reacts to a stressful situation in a dysfunctional and deconstructive manner e.g. isolating oneself from society, showing aggression towards others.

Zuckerman and Gagne (2003) have differentiated three adaptive and two maladaptive coping strategies.

The three adaptive coping strategies consist of approach coping, self-help coping and accommodation coping.

Approach coping is that problem-solving activities directed at the source of stress and consist of such variables for example: "I take direct action to get around the problem", "I do what has to be done, one step at a time", "I make a plan of action", "I try hard to prevent other things from interfering with my efforts at dealing with this". (Zuckerman, Gagne, 2003, p. 177).

Self-help coping can be defined as sustaining one's emotional well-being while under stress. This strategy is based on such variables for example: "I discuss my feelings with someone"; "I talk to someone about how I feel", "I talk to someone to find out more about the situation"; "I try to get emotional support from friends and relatives" (Zuckerman, Gagne, 2003, p. 177). Accommodation coping includes the reinterpretation in a positive manner of unsolvable problems. Some typical elements of this factor are: "I try to be optimistic despite what happened", "I accept the reality of the fact that it happened", "I look for something good in what is happening", "I try to identify something else I care about" (Zuckerman, Gagne, 2003, p. 177).

The two maladaptive coping strategies include avoidance and self-punishment.

Avoidance coping means denial of what has happened; blaming others for the problems and keeping the distance from the tension. Few items of this strategy: "Say to myself 'this is not real.'"; "I admit to myself that I cannot deal with it, and quit trying"; "I try to forget the whole thing" (Zuckerman, Gagne, 2003, p. 177).

Self-punishment can be characterized by self-blame and self-focused rumination attitudes and contains such statements as "I blame myself", "I just think about my problem constantly" (Zuckerman, Gagne, 2003, p. 177).

3. Research methodology

The paper aims to answer the following research question: How do early career academics cope with the experienced paradoxes?

In order to explore the perception and coping strategies of early career academics, qualitative research was done by the research group. The data was collected in a leading Hungarian Business School. The Hungarian academic market is rather concentrated since every fifth PhD (19,8%) on management field was gained at this University, and 71% of them was achieved in the Business School (Website of Hungarian Doctoral Council, 2018).

The target group of the data collection was the early career academics (ECA), who gained their PhD degrees no longer than 5 years, or they are still PhD students without a doctoral degree. The selection criteria was the current employment state of the respondent; all of them had a legal relationship with BS at the time of the interview. For example, if the respondent achieved their PhD degree in another university but worked for BS after, he or she might be included in the sample.

The sampling method has started with one respondent from each of the institutes of BS. The research group created the sample to be diverse in terms of age, gender, family status and previous work experience. The previous respondents always recommended the next interviewees, so in this term "snowball" methodology was also adopted into the sampling system. Participation in the research was voluntary.

Narrative interviews were used as a data collection method, and graph drawings optionally supplemented the interviews. Interviews were prepared with the help of an n introductory question guide to cover the most important topics of the career path of our ECA respondents. Each interview has included the admission to the PhD studies, critical incidents, interpretation of success in academia, personal goals and the potential exit causes.

Altogether 23 interviews were made and recorded by digital equipment. Each interview was transcribed for later analysis. Nine males and fourteen females told their career story within this research. The sample was also diverse in terms of age (from 25 to 45) and previous work experience outside of academia (e.g. from 0 to 15 years). All interviews were made in the period of March-May of 2018.

4. Empirical findings on paradoxes and coping strategies

In line with our empirical findings, our analysis is based on the three adaptive coping strategies and the one maladaptive strategy of self-punishment. Although all the paradoxes mentioned in the literature were recognizable in our empirical research, the paradoxes of performing, belonging and organizing were experienced to a larger extent in our findings.

Firstly, our findings highlight the particular importance of the paradox of performing for ECAs. As early career academics, our participants have to face conflicts of multiple roles and cope with tensions among their PhD studies, research, teaching and administrative responsibilities right from the beginning of their career.

Secondly, the paradoxical tensions of belonging between self-expression and collective affiliation appear to be significant in the early academic stage as well. While ECAs have to find their own identity and complete their thesis work in the long-run, they have to do networking and develop valuable connections with multiple actors (e.g. students, peers, senior academics and administrative staff) in the sake of their career development in their everyday work. The ability to balance between these two opposing forces seem to be one of the keys to the success of early career academics.

Thirdly, the tension of organizing is experienced with two faces based on the interviews: the illusion of freedom and the conflicting roles in co-operation. ECAs as talented individuals are experiencing a batch of possibilities, but in the end, they narrow their desired freedom to choose the time and duties for self-exploitation rather than saying "NO".

In the followings, the paradoxical tensions of performing, belonging and organizing will be presented, which are stemmed from our research. In response to each paradox the applied three adaptive, and one maladaptive coping strategies will also be discussed by highlighting the central role of seeking social support, which appeared in the coping strategies for each paradox.

4.1. How is performing paradox perceived by ECA

ECA needs to face with performing paradox since they meet several expectations already at the very beginning of their academic career. They are aware of the requirement that performing as a researcher and as a teacher simultaneously is expected.

> *"You have several roles as a researcher and teacher. Also, you have to switch between them every second hour."*

Although they must perform in all of the roles, PhD studies prepare only for research and doing research is also more honoured by the system. It is expressed that being a good teacher consumes much effort, and it should also be supported and encouraged.

> *"Which I find unacceptable is simply the fact that if you are outstanding in education so you are into teaching and developing curriculum then you are trapped in your career."*

They see that struggling with the roles is a general phenomenon among ECA, which many times is supplemented by other roles, like family roles or work outside Academia. Handling this role-conflict requires extra resources, especially if the social support from supervisors, colleagues and family members is not reachable for them.

> *"Navigate between roles. It means that I was a student and I had also worked for a while, and I was a researcher with two supervisors which means I had two bosses and of course I had to teach as an additional task. Time was the key to coordinate this somehow and solve all these above."*

4.2. How do ECA cope with performing paradox?

Time management as a problem solving activity is a key competence as an approach type coping strategy. Using time consciously means a solution to solve all the role demands on a daily basis.

> *"I am pretty good at time-management. For me, it was easy to keep myself to the deadlines, no awaken night spent with studying and essay writing, and yes, myself I think it is extraordinary."*

As self-help first need to realize that the rescue is not always coming from outside rather might be found inside. Balancing daily stress is needed.

> *"I had to realize that no one would help me if I will not be able to change. Therefore, you have to get yourself out of the hole, not just in the field of work but also in my private life. So the moment you start to change, help will arrive."*

Doing relaxing activities such as sports, hobby, travelling, etc. is also a frequently used tool to find a way for a break under pressure.

> *"Some do judo; everyone has his or her hobby to relax, to fill up mentally."*

The stress might be so stunning that having breaks and relaxing is not enough for coping and this point the best that one can do is to ask professional help.

> *"Well actually, from this year I am visiting a psychologist in connection with this problem."*

Accommodation seems a less likely used coping strategy for performing, but some ECA apply this kind of reframing or effort-optimization to survive the stress of constant performing pressure in different roles.

> *"From time to time, I do not miss to create those publications which might be written with not much effort from consulting project experience."*

As a self-punishment coping strategy for performing some ECA mentioned that they were so despaired or frightened of certain tasks or the high amount of responsibilities that they cried and could not sleep and their performance also decreased in the end.

> *"My main despair… was probably since all this took the time from me to do what, I think, I can do well, to do it really well and then I am getting worse and worse."*

> *"In the first semesters, I was frightened to death, I did not sleep; it was terrible… I had …a course (ed. which she held), after that I cried in the room in front of the supervisor practically."*

Another self-punishment strategy appears in the form of extreme struggling, feeling hopeless.

> *"I cannot do it better because it is impossible to tear apart in that many ways, but otherwise everyone is overwhelmed at the department."*

4.3. How is belonging paradox perceived by ECA?

At the early stage of their career ECA join immediately to a faculty, institute, department, research group and other formal academic units. However, they are required to meet the publication expectations on their own.

The question of personal success or creating within a research team has nowadays moved into the direction of collaboration. Fighting alone is no longer desired by young researchers. Research teams, networking opportunities are desired by ECA.

> *"So we have to learn how to research, and we are left alone, that is not working. The idea of everyone creating their own research is not viable."*

> *"More possibility for connection is required because students got lost and the university is not paying enough attention."*

The common usefulness is expressed to be important as working in a research group must be fruitful for all the participants, and no one might be taken self-seeking advantage of it.

> *"In the past two years, hal have worked less on my field, but I was involved in other research projects … I had to realize that I have worked for others and not for myself."*

"There are several expectations from the higher level to fulfil, but your expectation and own interest should be found and followed while doing research."

4.4. How does ECA cope with belonging paradox?

The respondents mentioned that having an experience abroad as an ideal approach strategy. It has helped them both find professional contacts and keep their distance from the daily university routine and focusing on their research field.

> *"I took a semester abroad… I attended PhD courses and contacted researchers from the university or anywhere else who has similar research field as I have."*

> *"And then I have won this scholarship, and I could go abroad for a semester, and I could work on my research."*

Belonging to a community but also following personal goals is a constant source of stress. To meet the community's expectations is very demanding, and ECA must be very strict about saving his or her time for fulfilling the personal goals as well. This self-help need teaches ECA to say 'NO' for tasks, which are out of their scope.

> *"But finally, I succeed how to say no for such things that I do not really want to do. I can say no, and I will not be devaluated."*

ECA need to be able to express their difficulties to their communities.

> *"I was lucky that I could tell at my department that this thing is a big burden for me."*

They accommodate to the game and accept that personal contacts are a must for success. Working alone in academia seems no solution in order to achieve personal goals. Having a professional network and other official and unofficial research communities seem desirable social support.

> *"If we cannot find the appropriate researcher community in the very beginning, whom we could easily work with than it is out of the question. Because of all alone…that's not possible."*

As a self-punishment coping strategy some ECA feel torn apart and overwhelmed while they keep struggling with their many roles, tasks and responsibilities in order to belong, and this may result in becoming seriously ill or causing problems in the family.

> *"This role model is a bit of a struggling kind of person who is juggling with his/her many hats and has many tasks and has been busy always" … "I have the feeling that this is the expectation that you should look like this in this role already…"*

> *"By the way now, what has opened my eyes is that I had a pretty serious illness in the spring and I did not content myself with the treatment of the physical symptoms only, but I also went after it psychically and then these stories turned out."*

> *"The two are interacting with each other, but I think not my family makes my work not function, but my work makes my family not to function well enough."*

Being busy to struggle in order to belong, they do not realize that the self-punishment works against belonging – with everyone being so over preoccupied with tasks they forget to belong, they instead try to fit in.

4.5. How is organizing paradox perceived by ECA?

ECA arrive in academia with the dream of personal and professional freedom, but a high price must be paid for this freedom as the workload seems flexible but somewhat overloaded. Freedom gives the flexibility for family and other duties, and it means the freedom of mind and spirit.

> *"That is exactly why I am in Academia: freedom and flexibility. If these get lost, I could be anything else."*

However, the roles are demanding, and the typical workload is claimed to be rather too much. ECA's freedom is only for navigating between roles and choosing the timing of their working hours but not the type and amount of tasks. ECA's seems to become more self-exploiting rather than saying "NO".

> *"You cannot escape from assignments and tasks; they are sticking to you."*
>
> *"For me, it was usual to work on weekdays and study on weekends. That is absolutely abnormal and unnatural."*
>
> *"I cannot agree with the acceptance of overwork. We should stop to consider it as a cultural value."*

4.6. How does ECA cope with organizing paradox?

The tension of the freedom for working in many roles with many tasks might be approached by dedicating enough time for academic life and duties.

> *"Do not work in full-time besides PhD, especially not at multinational companies. Finally, I can understand why the system was different before, so that they could only have part-time jobs. I actually underestimated this whole process."*

Paying attention to other needs of ECA is a desired self-help coping strategy not only for the body but also for the soul and the community needs.

> *"When I finally reached the point, where I could hand in the first version of my dissertation I promised myself to buy the gym and swimming pool membership as soon as possible."*

A coping strategy might be to accommodate with organizing paradox is restructuring the available resources and use any social support that might be available from colleagues, friends and family.

> *"My parents could tell stories, I guess… For example, when we went on holiday for 2 weeks, the line-up was the following: they played with my children while I was writing one of my papers."*

A typical coping strategy as a self-punishment for organizing is that some ECA willingly allocates their time in a way that they work late at night.

> *"In the research phase, you can allocate your time completely flexible, so you can write a dissertation at 2 a.m., and that was not a problem at all."*

Table 2. below summarizes the main coping strategies found in the empirical research according to the performing, belonging and organizing paradoxes.

Table 2. Coping strategies in practice for ECA

			PARADOXES		
			PERFORMING	**BELONGING**	**ORGANIZING**
COPING STRATEGIES	**Adaptive**	**Approach**	• time management	• going abroad for research cooperation	• dedicating enough time for academic life and duties
		Self-help	• doing relaxing activities • asking for professional help (psychologist)	• saying NO for tasks out of focus	• paying attention to other needs (community, body and soul)
		Accommodation	• reframing, optimizing effort (e.g. create publications from consultany projects)	• asking comments from foreign researcher in order to get in touch • finding research communities	• using available resources from colleagues, friends and family
	Maladaptive	**Self-punishment**	• being frightened to death, not sleeping, crying • despair, getting worse and worse at which he/she is good	• struggling with many roles, responsibilities and tasks • feeling torn apart and overwhelmed • getting seriously ill • too much work causing problems in family	• working at late night

Source: Own research

5. Summary

It seems that among the early career academics, three dominant paradoxes are highly visible. Performing is a tension for them from the very beginning of their career as they need to perform as researchers and teachers at the same time. They need to adapt themselves for this requirement. Belonging is also two-faced for ECA since credit and publication pressures are demanding on a personal level, but they are also related to several institutional units, and they are also pushed to serve the common interest for their department, faculty or research group. An additional third paradoxon appears for ECA on

their personal level. They arrive in academia with the hope of freedom, but they need to face that the illusion of freedom may be more present.

Coping with paradoxes might be approach type, and/or self-help type, and/or accommodation type. ECA uses the three techniques to juggle with their tensions. For each paradox they try to find social-support whether it is coming from their professional work or from private life. The presence of maladaptive coping strategy – self-punishment – may be perceived as a proof for the existence of paradoxes: it is difficult to solve the tensions in the long run while struggling to satisfy immediate expectations too.

The paper explores the paradoxes separately, overlooking their dynamic and interrelated nature, which makes even more complicated the coping for the individual. Therefore further analysis of data is needed in order to explore coping with the dynamic and interrelated system of paradoxes. The presence of self-punishment technique suggests, that besides the virtuous cycle the vicious cycle (Smith and Lewis, 2011) is also present, and there is a need for further analysis to uncover their possible relationship, and the practices along which stepping out, transforming the vicious cycle may be possible. These limitations may be answered in a next paper through a longitudinal analysis of the ECA narratives.

References

Altbach, P. G. (2001): Academic freedom: International realities and challenges, Higher Education, 41, pp.205-219.

Alvesson, M. and Spicer, A. (2016): (Un)Conditional surrender? Why do professionals willingly comply with managerialism, Journal of Organizational Change Management, 29(1), pp. 29-45.

Baker, J. P. and Berenbaum, H. (2007): Emotional approach and problem-focused coping: A comparison of potentially adaptive strategies, Cognition and Emotion, 21(1), pp. 95-118.

Billot, J. (2010): The imagined and the real: identifying the tensions for academic identity, Higher Education Research & Development, 29(6), pp. 709-721.

Bodor, M. (2015): Az oktatási és kutatási tevékenységek arányának vizsgálata az állami felsőoktatási intézményekben, Vezetéstudomány/Budapest Management Review, 46(8), pp. 44-76.

Broadhurst, K. (2014): Academic publishing and the doctoral student: Lessons from Sweden, Qualitative Social Work, 13(5), pp. 595–601.

Butler, N. and Spoelstra, S. (2014): The Regime of Excellence and the Erosion of Ethos in Critical Management Studies, British Journal of Management, 25(3), pp. 538-550.

Carver, C. S., Scheier, M. F., and Weintraub, J. K. (1989): Assessing coping strategies: A theoretically based approach, Journal of Personality and Social Psychology, 56(2), pp. 267-283.

Cohen, S. (2004): Social relationships and health. American psychologist, 59(8), p.676.

Dysvik E., Natvig G.K., Eikeland O.J. and Lindstrøm T.C. (2005): Coping with chronic pain, The International Journal of Nursing Studies, 42(3), pp. 297-305.

Edwards, M. and Roy, S. (2017): Academic research in the 21st century: maintaining scientific integrity in a climate of perverse incentives and hypercompetition, Environmental Engineering Science, 34(1), pp. 51-61.

Folkman, S. and Lazarus, R. S. (1991): Coping and emotion. In A. Monat & R. S. Lazarus (Eds.), Stress and coping: An anthology, pp. 207-227.

Frick, L. Albertyn, R. Brodin, E. McKenna, S. and Claesson, S . (2016): The role of doctoral education in early career academic development. Postgraduate Supervision: Future foci for the knowledge society, p.203.

Hampel, P. (2007): Brief report: Coping among Austrian children and adolescents. Journal of Adolescence, 30(5), pp.885-890.

House, J. S., Kahn, R. L., McLeod, J. D., and Williams, D. (1985): Measures and concepts of social support. In S. Cohen & S. L. Syme (Eds.), Social support and health, pp. 83-108.

Lazarus, R. and Folkman, S. (1984): Stress, appraisal, and coping. New York: Springer Publishing Company.

Lee, J.T. (2014): Education hubs and talent development: Policymaking and implementation challenges. Higher Education, 68(6), pp.807-823.

Lewis, M. W. (2000): Exploring paradox: towards a more comprehensive guide, Academy of Management Review, 25(4), pp. 760-776;

Nahum-Shani, I. and Bamberger, P.A. (2011): Explaining the variable effects of social support on work-based stressor–strain relations: The role of perceived pattern of support exchange. Organizational Behavior and Human Decision Processes, 114(1), pp.49-63.

Parker, J.D.A. and Endler, N.S. (1992): Coping with coping assessment: a critical review, European Journal of Personality, 6, pp. 321–344.

Pearlin, L. I. and Schooler, C. (1978): The structure of coping. Journal of Health and Social Behavior, 19(1), pp. 2-21.

Pernicka, S. and Lücking, S. (2012): How Knowledge Shapes Collective Action: Professionalism, Market Closure and Bureaucracy in the Fields of University and Non-university Research, Journal of Industrial Relations, 54(5), pp. 579-595.

Putnam, L. P., Fairhorst, G. T., and Banghart, S. (2016): Contradictions, dialectics, and paradoxes in organizations: A constitutive approach, The Academy of Management Annals, 10(1), pp. 65-171.

Raza-Ullah, T., Bengtsson, M., and Kock, S. (2014): The coopetition paradox and tension in coopetition at multiple levels. Industrial Marketing Management, 43(2), pp. 189-198.

Schmidt, A. (2018): Torn academics. Lenses on roots of tensions and responses to competing logics in Higher Education.

Schoenmakers, E. C., van Tilburg, T. G., and Fokkema, T. (2015): Problem-focused and emotion-focused coping options and loneliness: how are they related?, European journal of ageing, 12(2), pp. 153-161.

Smith, K. W. and Lewis, M. W. (2011): Toward a Theory of Paradox: A Dynamic equilibrium Model of Organizing, Academy of Management Review, 36(2), pp. 381-403.

Smith, W. K. (2014): Dynamic decision making: A model of senior leaders managing strategic paradoxes. Academy of Management Journal, 57(6), pp. 1592-1623.

Sutherland, K. A. (2017): Constructions of success in academia: An early career perspective, Studies in Higher Education, 42(4), pp. 743-759.

Thoits, P.A. (1995): Stress, coping, and social support processes: Where are we? What next?. Journal of health and social behavior, pp.53-79.

Zuckerman, M., and Gagne, M. (2003): The COPE revised: Proposing a 5-factor model of coping strategies. Journal of Research in Personality, 37(3), pp. 169-204.

ONLINE Source

Hungarian Doctoral Council, 2018. Available at: https://doktori.hu/ (downloaded: 10 December 2018)

Teaching for Excellence, Teaching the Excellence

Methods of quality improvement in higher education at Óbuda University, Donát Bánki Faculty of Mechanical and Safety Engineering

Gabriella FARKAS, András HORVÁTH, Georgina Nóra TÓTH

Abstract

The quality aims are determined in the quality policy of Óbuda University. In this document, the practice-oriented education has paid attention to. There is a large emphasis on the cleanliness of laboratories; therefore the students and teachers can work in safe working conditions. For this reason, the 5S system has been introduced, which is based on cleanliness and safety.

The management and the staff of the Bánki Donát Faculty at Óbuda University can create such a learning-teaching environment where the students and the teachers are given encouragement and support, but at the same time, they can realize their talent and creativity. For this reason professional and cultural events (Researchers' Night, Lego Day), student circles and competitions (RECCS Competition of Spaghetti Bridge Building), an expanding training opportunities (criterion subjects in English and German language), blended e-learning education (e-learning materials on the Moodle system), international mobility programs provide a framework.

A series of innovative solutions developed in recent years have contributed to achieving the objectives of quality policy. In our article, we would like to introduce these quality improvement methods which are used to evaluate the education systems of Óbuda University.

1. Introduction

The Bánki Donát Faculty of Mechanical and Safety Engineering at Óbuda University, the "Bánki" is a university faculty with more than 135 years history and considerable traditions. Its training programmes are popular and acknowledged at BSc, MSc and postgraduate levels. There are:

- BSc and MSc: Mechanical engineering
  Mechatronics engineering
  Safety engineering
- Postgraduate: Quality assurance
  Metrology
  Classic car restoration
  Occupational safety and health, etc.

We have a wide range of training, and the number of the student is higher (about 3,000) than in the state of the year 2008 (2300 head). The Óbuda University (ÓE) has been operating a certified ISO 9001 since 2004; the Higher Educational Quality Award was won in 2009. An integral part of the quality improvement program of ÓE is the integrated implementation of the Occupational Health and Safety Management System and Quality Management System. Taking into account its specificities, the Faculty wants to develop and apply methods that help to achieve the objectives of quality policy. These are often not classical quality improvement methods, but they are good practices or novel solutions that deliver spectacular results.

2. Methods of quality improvement

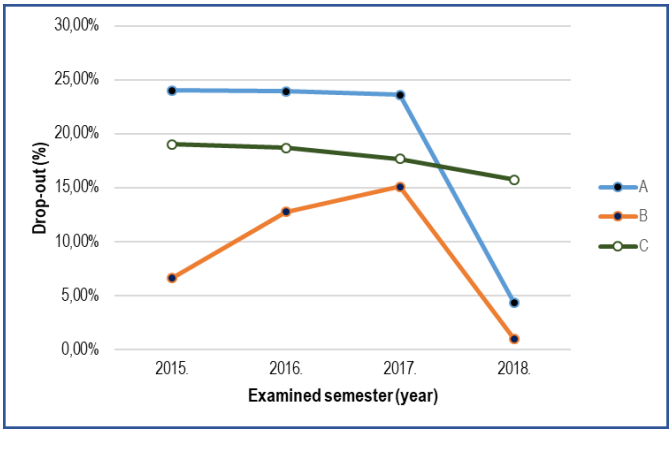
The quality methods and tools are so important and widespread that they can be applied extensively, regardless of the activity of the organization. For many years the quality improvement tools and methods have been developed and applied by many qualified professionals. Some of them are well known, and others are not so famous. There are more than one hundred methods available in the toolbar, which are useful and easy to use during the process improvement. (Nancy R. Tague, 2005.).

2.1. Reduction of the students' drop-out

At the university, the main value is the student. The number of students' drop-out is a serious problem, therefore a new method, a mentor system has been introduced to eliminate the deficiencies of the credit system, and it helps to the students to absolve the semester. The tutoring teacher program started in the fall semester of the 2016/17 academic year. Mentors follow the students' improvement, evaluate their performance and help to solve their personal or community problems. The mentor usually can manage about 25 students in a class. A close relationship evolved which can get them through easier on the initial difficulties. The target value for the reduction of students' drop-out is 5%. With the achievement of this aim, the Faculty will give stable, marketable degrees for their students. The program reduces the number of semesters spent by our students, which improves our judgment. Another form of assistance is the introduction of an e-learning system in the field of training. The combination of these two tools can produce the expected results.

- The following figure (Figure 1) presents an evaluation and examination of the student's drop-out for a selected subject. We teach this subject in all fields (Mechanical engineering, Mechatronics engineering, Safety engineering) in BSc level. We use in this article the signs A, B, C, because it is not relevant to evaluate the different specialisations.

Figure 1 Examining the student's drop-out in the academic years (2015-2018)



The dropout rate shows how many percent of students did not meet the requirements compared to the total number of students, so they did not successfully complete the course (no practice mark). In the period under the review, different results can be seen in the three different fields (A, B, C). The assessment of the results includes the number of students in the grade, which is the highest in the specialization B: 180-220 persons, followed by specialization C (70-110 persons) and specialization A (45-95 persons).

Typically, for the first three years of the examined semester, the highest drop was in the case of A (24%), for C it was around 18%, and for B increased from 6% to 15%. In the first three years of the study, we used the Moodle system (electronic notes and auxiliary materials, control questions), but the examinations were completed traditionally. In the last semester, we developed more clear materials, and many introduced/practising online tests and the examinations were also carried out in the e-learning system. We achieved a spectacular improvement in student dropouts for A and B, but also decreased the value in C. Our goal is to keep the dropout rate below 5%, which we need to develop significant curriculum development and learning materials.

In general, the analysis and evaluation of student achievements, deliverables provide useful information for trainers and course developers. The mentor teacher program is based on a new idea; an entirely new approach program has been developed with the help of teachers, educators and psychologists.

2.2. Modern teaching methods

Blended learning is a new educational form which connects the methods of traditional teaching and e-learning. The modernization of the curriculum could be implemented flexibly in the Moodle system (electronic notes, interactive consultations), while the traditional practical exercises have remained. Professional subjects taught in a foreign language (English or German) are popular among the students because it can be well used later in their job applications at a multinational firm. The publication of electronic textbooks and lectures in the Moodle system has existed for several years. Students usually give positive feedbacks (in the opinion of the students) as it has become much easier to learn and understand the basics of the subjects. The application of this method can be seen in the improvement of the results.

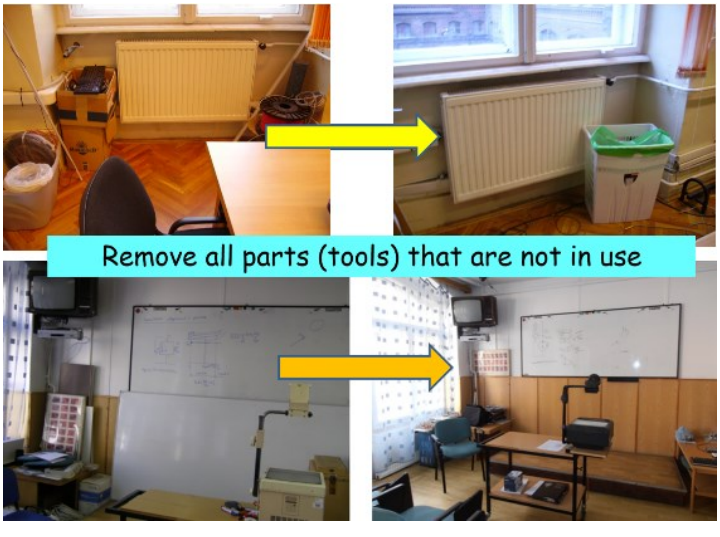
The electronic teaching materials are modern, modern engineering technologies can be adapted more easily and quickly. The students can access the notes in a more flexible way, which can help to improve their learning results. The blended learning is the result of a long evolution. There are many opportunities in this method, seeing toward the future as virtual consultation and electronic exams.

2.3. Safe and organized labs

A wide range of students have the opportunity to visit the labs of the Faculty regularly and to use the various devices. There are about 30 labs on the Faculty. Each lab has different equipment, capabilities, and purposes. There are some labs where are curriculum courses, in others are research-related activities, and some with work outsourced. The differences in the character of the labs are also very different. In the computer lab, the teachers and students are in very different circumstances than in the machine lab. That is the reason that each laboratory must be individually examined and the development or the opposite should be evaluated against itself.

The 5S method was published and presented in 1991, which effectively contributes to efficiency and safety in the workplace, makes work processes more transparent and contributes to the safe and orderly maintenance of the workplace (Talbot, B., 1995). The introduction and application of the 5S method also show a numerically measurable increase in productivity as well as visible changes in the orderly, clean maintenance of the workplace, in the mindset of the employees (Czifra Gy. 2016).

Figure 2 Before and after the 5S audit



The prevention of accidents and the guides to use dangerous equipment are important requirements. The annual internal 5S audit helps us to achieve these objectives. The 5S audits introduced contributed to the development of an appropriate working

environment, highlighted the deficiencies and changed the attitude of the staff. Additionally, students are taught to comply with workplace rules, environmental protection. The picture (Figure 2) shows a good example of the effective application of the 5S method. It can be seen that the original condition (left): unordered lab with unnecessary things and the ordered lab (right): tools and equipment which are in a good position. The lab audits started in 2010, and it has annual repetition since then. The results of these audits can be found as 'good practice' for the other faculties of Óbuda University (Farkas G., Zelei S. 2017).

The maintenance and development of laboratories have boosted industrial relations as the companies can keep courses and can install various equipment in an environment that meets their expectations.

2.4. Students circles, competitions

The teams applied to competition need to have coordinated teamwork, persistence, basic professional knowledge and strong motivation. These skills make them better prepared after graduation to industrial companies to participate in real projects. The Faculty has announced the "Most Innovative Thesis of the Year" competition since 2013 in which the most successful students get financial support and opportunity for the realization of their ideas.

The professional competitions give opportunities for students to measure their innovative ideas at a national or international level. These programs (TechTogether, "RECCS" Spaghetti Bridge Building World Championship, "Go-kart, go-Bosch", Lego Day, Pneumobil construction, PLC programming competition) contribute for the forming of engineering thinking because these programs are popular and the number of the curious students increase year by year.

3. Summary

We presented in this article some of the quality improvement methods which we have used in recent years to improve the quality of education. The methods were presented from different perspectives, and their efficiency and effectiveness were described. Summarized we can determine that, these methods were supported the qualitative goals and their application required a lot of work and energy. The engineering graduation at our Faculty means professional knowledge, perseverance, competitive spirit and teamwork to achieve a common goal. The companies know and recognize these so we can do marketable engineering training.

References

Czifra Gy. (2016): Az 5S rendszer bevezetése a valós életben - problémák, megoldások, sikerek..., *Proceedings of 8th International Engineering Symposium at Bánki (IESB 2016),* Budapest, pp. 20.

Farkas G. and Zelei S.: Az 5S módszer alklamazása laborok felülvizsgálatánál, XXII-th International Scientific Conference of Young Engineers, Kolozsvár, Románia, pp. 139-142.

Nancy R. Tague (2015): The Quality Toolbox, Second Edition, *ASQ Quality Press,* Milwaukee, Wisconsin, pp. 6–12.

Talbot, B. (1995): 5 pillars of the visual workplace. The sourcebook for 5S implementation. *Productivity Press*, New York, pp. 33-38.

Who are the most important "suppliers" for universities? Ranking secondary schools based on their students' university performance

Noémi HORVÁTH – Roland MOLONTAY – Mihály SZABÓ

Abstract

Considering the intensifying competition in the higher education sector, it is getting increasingly more important for universities to identify the secondary schools, where the best performing students come from. The most common approach is relying on the general ranking of secondary schools. A drawback of these traditional rankings is that further university performance of the students is not taken into account, and these rankings cannot be tailored for specific disciplines. In this paper, we introduce a new approach for ranking secondary schools based on their students' later university performance. Our study is based on the analysis of the academic performance of ~33000 students from Budapest University of Technology and Economics using data from Neptun educational administration system spanning 14 semesters between 2010 and 2017. We compare our results to the outcome of other existing rankings of Hungarian secondary schools, and we demonstrate significant differences. We also show that it is worth considering rankings by disciplines.

1. Introduction

Ranking educational institutions is a highly debated topic that has attracted tremendous attention from researchers, from policy-makers and even from the public. In particular, high

school rankings have also gained much interest. Ranking secondary schools can be useful for higher educational institutions in deciding where to plan promotional campaigns and outreach programs. It can be helpful for the parents to decide which school should they enrol their children. These rankings can also help high schools to find areas where they can improve their education.

On the other hand, it is worth emphasizing that every ranking is biased and somewhat arbitrary in the sense that there is no ranking which can consider all the possible aspects (e.g. absolute output based ranking vs added value based ranking). One should be aware of what aspects the rankings measure and what their moral objectives are. Despite the simplicity and accessibility of numerical rankings, caution is required to draw a strong conclusion from such a ranking.

In this study, we introduce a novel method for ranking high schools based on their students' later university performance. We also implement our approach using data from the Budapest University of Technology and Economics. We compare our findings to the results of other Hungarian high school rankings, and we point out the main differences. We also demonstrate our web application, which enables users to select different aspects that serve as the base of the ranking and the disciplines of interest can be selected as well.

1.1. Short review of the literature

Measuring academic and educational performance has been in the focus of research interest for decades. Several methods have been proposed for ranking academic journals, research institutes (Kalaitzidakis et al., 2008; Bontis, Serenko, 2009) and educational institutions, mostly universities (Merisotis, 2002; Liu, Cheng, 2005).

A possible approach to rank universities is based on the revealed preference ranking of the applicants (Telcs et al., 2016; Csató, Tóth, 2018). This approach is parameter-free and independent of arbitrarily selected factors and component weights. One can argue that students' revealed preferences may be biased: it highly depends on the geographic location of the students or weaker students do not apply for hard (but good) universities. Several rankings are based on research output (e.g. Taylor, Braddock, 2007), that is they measure the number of publications and citations of researchers affiliated with universities. A drawback of these rankings is that they do not take account of the quality of the education. There are also reputation-based rankings (e.g. Dill, Soo, 2005), which are based on the opinion of experts (e.g. recruiters) or students. This approach is not data-based, and it highly depends on the set of interviewed recruiters/students.

Several other ranking methods have been proposed in the literature for a survey see (Usher, Savino, 2007). It is also worth mentioning that many authors question the

necessity and critically analyze the excessive use of such rankings, by pointing out to the fact that rankings are reconstituting the role of educational institutions and the role of academics (Lynch, 2014; Collins, Park, 2015). We can conclude that there is no international consensus on how to measure academic and educational performance neither regarding universities nor in a high school setting.

1.2. High school rankings in Hungary

There are only a few systematic high school rankings in Hungary. The most common approach is relying on the general ranking of secondary schools. The most known high school ranking is the 'HVG 100 Best Secondary Schools'[51], which is an annually published, paper-based ranking relying on the following aspects:

- Results of matura exams[52]
- Results of national competency assessment
- The ratio of students enrolled in higher education

An online, interactive example of high school rankings can be found on the website legjobbiskola.hu, which ranks the schools by the followings:

- Results of matura exams
- Results of national competency assessment

The previously mentioned rankings focus on the absolute results of the "output"; however, a different approach is used by Neuwirth (2002) and Nahalka (2013)[53]. They evaluate the pedagogical added value of the schools to measure the efficiency of the education based on the performance progress of the results of the national competency assessment, controlling for the socio-cultural background of the students. Note that this ranking is not in commercial usage.

The drawback of the traditional rankings is that they mostly rely on students' data that are available at the time of graduation from their secondary school, but they do not consider the further performance of the students in higher education. Another disadvantage that these rankings cannot be tailored for specific disciplines since a school might train excellent future economists, but inferior engineers.

[51] https://hvg.hu/itthon/20181017_Itt_a_HVG_2019es_kozepiskolai_rangsora_elen_a_Radnoti
[52] Centralized secondary school exit exams
[53] https://index.hu/belfold/2015/12/07/a_kozepiskolak_rangsora_-_maskepp_nahalka_istvan_pedagogiai_hozzaadott_ertek/

2. New methodology

Our approach ranks secondary schools according to ten aspects, mostly based on longer-term university performance related metrics of students coming from a given school. These metrics include the ratio of dropped-out students, GPA of the students, and the qualification of their undergraduate diplomas.

The ten aspects are based on both high school and university performance. There are five prior performance-related aspects and five university performance-related indicators. The five prior aspects are:

- Number of students enrolled in higher education
- Admission point score[54]
- Result of the math matura exam
- Result of the 0th assessment math test
- Language certificates (according to a scoring matrix (Table 1))

The five longer-term university performance related aspects are:

- Grade point average (GPA)
- Diploma grade point average
- The pace of progress (number of obtained credits per semester)
- The ratio of graduated of students
- Graduation time

[54] In Hungary students applying for undergraduate degree programs gain a nationally standardize admission point score (Nagy et al., 2018)

Table 1 Scoring matrix for language certificates

Level	Type	Score
Elementary	Oral or Written	0.25
Elementary	Complex	0.5
Intermediate	Oral or Written	0.5
Intermediate	Complex	1
Advanced	Oral or Written	0.75
Advanced	Complex	1.5

All the metrics are calculated relatively, compared to the average metrics of the given programme to handle the different grading leniency at various programs. We derive the score of a high school regarding a certain aspect at a given faculty (or program) in the following manner. To make a statistically grounded comparison, a metric is calculated only if there are enough data points from that school, so we use an adjustable limit parameter. First, we calculate the average score of the faculty:

$$\mathbf{AverageScore}(\mathrm{Faculty}_i) = \frac{1}{|\mathrm{Faculty}_i|} \sum_{\mathrm{student} \in \mathrm{Faculty}_i} \mathbf{Score}(\mathrm{student})$$

Then we can calculate the result score of a certain high school at a given faculty (or program) as follows:

$$\mathbf{Result}_i(\mathrm{HS}_j) = \frac{1}{|\mathrm{HS}_j \cap \mathrm{Faculty}_i|} \sum_{\mathrm{student} \in \mathrm{HS}_j \cap \mathrm{Faculty}_i} \frac{\mathbf{Score}(\mathrm{student})}{\mathbf{AverageScore}(\mathrm{Faculty}_i)},$$

where HS stands for high school and $\mathbf{Result}_i(\mathrm{HS}_j)$ is the result score of the *j*th high school at the *i*th faculty.

If one would like to create a single aggregated ranking based on more than one aspect, one can simply add up the ranks of the one-dimensional subrankings. On the other hand, this way, the absolute differences are not considered. Here, we follow another approach: to make the aspects more comparable, we scale the results to the interval [0, 100] with the following formula:

$$\mathrm{X}_{\mathrm{rescaled}} = \frac{X - X_{min}}{X_{max} - X_{min}} \cdot 100,$$

where X is the original result score and X_{min}, X_{max} are the minimum and maximum scores that schools obtained regarding a certain aspect. The final aggregated score is the average of the scores obtained from the desired aspects.

3. Analysis of BME data

Our study is based on the analysis of the high school related and university performance related data of ~33000 students from Budapest University of Technology and Economics. The data are coming from Neptun educational administration system spanning 14 semesters between 2010 and 2017. One student can enrol to more faculties and can apply the same faculty more times, so one sample object is identified with the following three parameters:

- Student ID,
- Faculty ID,
- Date of enrolment.

The secondary schools are identified by the OM identifier, a national identifier of Hungarian educational institutions.

3.1. Challenges

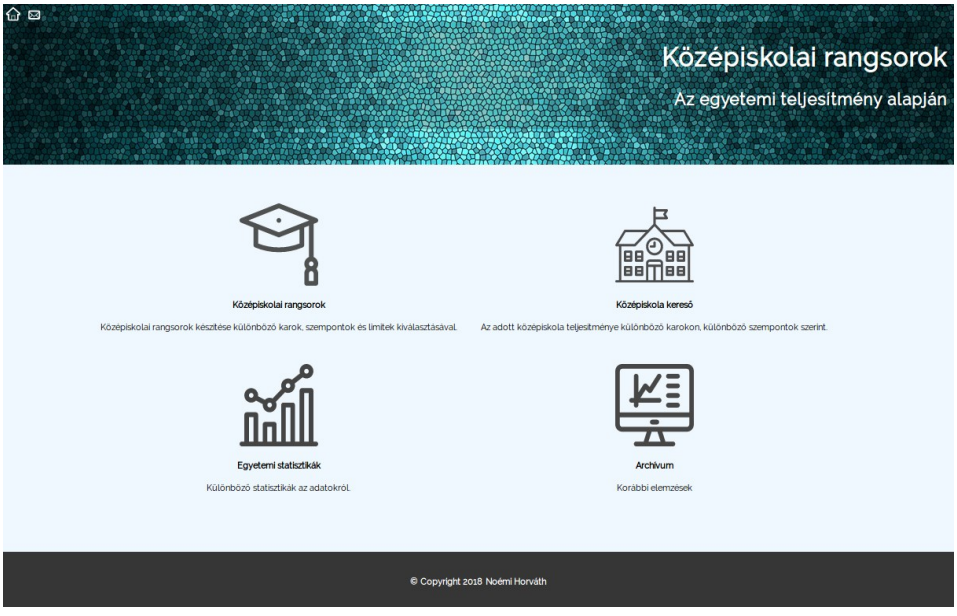
Some challenges make the data processing difficult, e.g. missing data (especially the matura related data). Other obstacles that we had to overcome are the school renamings and mergers. Some schools have more OM identifier, which makes the unique identification challenging. There are so-called training centres, which group more school into one institution (one OM for all members) and thus we cannot decrypt which member school the students came from.

4. Web application

We also present our software - this innovation enables users to select different aspects that serve as the base of the ranking and users can also select the disciplines (faculties) of interests. The software determines the ranking of the „supplying" secondary schools for the selected faculty based on the pre-defined aspects. To eliminate the distortion effect of

potential edge cases, we introduced some suspension mechanics to the business logic of our application.

Figure 1 Home page of the web application



The web application is written in Python3 and uses a micro framework, called Flask and a visualization package, called Bokeh. It has two main functions. First, it can generate a ranking based on an adjustable set of faculties, aspects and limits. The output of this feature is a PDF file describing the rankings for every aspect-faculty-limit triplet and an overall result for every limit. The other feature of the application is that it can also generate a guide for the secondary schools that sheds light on ranks of the certain school regarding certain indicators and faculties. This feature can help to notice the aspects in which the given school performs weakly. Also, the application has an archive, where the previously generated files can be downloaded, and it also has a statistics page with different charts to better understand the data we are working with.

5. Results

We compare our results to the outcome of other existing rankings of Hungarian secondary schools, and we demonstrate significant differences. We also show that it is worth considering faculty sub-rankings, since a secondary school that sends well-performing students for one faculty may underperform regarding another faculty. In this paper, we consider faculty sub-rankings instead of program-specific rankings since aggregating the results on the program level leads to a more fragmented and statistically less grounded comparison. Moreover, at BME, the programs of faculties are similar enough to make the faculty aggregation reasonable.

In this section, we consider the aggregated ranking that is based on the five longer-term university performance related indicators detailed in Section 2. In general, we can conclude that some schools are highly ranked in every ranking (Table 2). On the other side, secondary schools from the countryside perform better in our ranking system: there are 14 schools from the countryside in our TOP 20. Another interesting discovery is that vocational schools rank quite high regarding certain disciplines, especially regarding engineering faculties (Table 3).

6. Outlook

To the best of our knowledge, this is the first study that ranks secondary schools based on their former students' university performance. We implemented our method using data from the Budapest University of Technology and Economics. In the future, we aim to use our novel methodology involving more Hungarian universities and handle the different standards of the various universities. Our proposed method can also be applied in an international context, especially if the set of "supplying" secondary schools is confined. For country rankings, the presence of nationally standardized measurements and an appropriate aggregation method is also needed.

On the other hand, as a limitation of this approach, even if we gather all the data of Hungarian universities, we will probably have no data about students who continue their studies abroad. It can be disadvantageous for "elite" secondary schools since a not negligible ratio of their students continues their studies abroad. Furthermore, we do not measure the performance of those who start working instead of attending colleges. It can be disadvantageous for vocational schools since their students may be very successful in their profession, and it is not reflected in our ranking. Our methodology is not able to overcome the above-mentioned problems; however, the later university performance of students is an important indicator of secondary schools.

Table 2 Comparing our TOP 20 to other rankings

High school	Our rank	HVG rank	legjobbiskola.hu
Eötvös József Gimnázium, Budapest	1	3	3
Teleki Blanka Gimnázium, Székesfehérvár	2	60	269
Fazekas Mihály Fővárosi Gyakorló Ált. Isk. és Gimnázium, Budapest	3	4	10
Veres Péter Gimnázium, Szakközépiskola és Szakmunkásképző, Budapest	4	10	37
Janus Pannonius Gimnázium és Szakközépiskola, Pécs	5	43	161
Lovassy László Gimnázium, Veszprém	6	8	1
Belvárosi Általános Iskola és Gimnázium, Békéscsaba	7	100	171
Radnóti Miklós Kísérleti Gimnázium és Általános Iskola, Szeged	8	15	4
Apáczai Csere János Gyakorló Gimnázium (ELTE), Budapest	9	6	30
Városmajori Gimnázium, Budapest	10	11	20
Zrínyi Miklós Gimnázium, Zalaegerszeg	11	23	8
Vörösmarty Mihály Gimnázium, Érd	12	40	58
Szent István Gimnázium, Kalocsa	13	-	134
Herman Ottó Gimnázium, Miskolc	14	12	60
Széchenyi István Gimnázium, Sopron	15	44	95
Piarista Gimnázium, Budapest	16	34	50
Debreceni Egyetem Kossuth Lajos Gyakorló Gim- náziuma és Általános Iskolája, Debrecen	17	16	13
Földes Ferenc Gimnázium, Miskolc	18	59	217
Révai Miklós Gimnázium és Kollégium, Győr	19	21	26
Fényi Gyulai Jezsuita Gimnázium, Miskolc	20	45	81

Source: legjobbiskola.hu, HVG Középiskolai Rangsor

Table 3 Top suppliers for the Faculty of Mechanical Engineering

Rank	High school
1	József Attila Gimnázium, Makó
2	Petőfi Sándor Evangélikus Óvoda, Ált. Isk., Gimnázium és Kertészeti Szakközépiskola, Kiskőrös
3	Bródy Imre Gimnázium és Szakközépiskola, Budapest
4	Petőfi Sándor Gimnázium, Kollégium és Közétkeztetési Központ, Mezőberény
5	Szent Orsolya Római Katolikus Általános Iskola, Gimnázium és Kollégium, Sopron
6	Jurisich Miklós Gimnázium és Középiskolai Kollégium, Kőszeg
7	Gépipari és Informatikai Műszaki Szakközépiskola, Szombathely
8	Padányi Bíró Márton Római Katolikus Gimnázium, Egészségügyi Szakközépiskola, Szakiskola és Általános Iskola, Veszprém
9	Fazekas Mihály Fővárosi Gyakorló Általános Iskola és Gimnázium, Budapest
10	Leőwey Klára Gimnázium, Pécs
11	Veres Péter Gimnázium, Szakközépiskola és Szakmunkásképző, Balmazújváros
12	Gépészeti és Számítástechnikai Szakközépiskola, Békéscsaba
13	Hőgyes Endre Gimnázium és Szakközépiskola, Hajdúszoboszló
14	Janus Pannonius Gimnázium És Szakközépiskola, Pécs
15	Teleki Blanka Gimnázium, Székesfehérvár

Acknowledgement

We thank Marcell Nagy for his valuable comments. The research reported in this paper was supported by the Higher Education Excellence Program of the Ministry of Human Capacities in the frame of Artificial Intelligence research area of Budapest University of Technology and Economics (BME FIKP-MI/SC) and by the EFOP-3.4.4-16 grant. The research of R. Molontay was partially supported by NKFIH K123782 research grant.

References

Bontis, N., & Serenko, A. (2009). A follow-up ranking of academic journals. Journal of Knowledge Management, 13(1), 16-26.

Collins, F. L., & Park, G. S. (2016). Ranking and the multiplication of reputation: reflections from the frontier of globalizing higher education. Higher Education, 72(1), 115-129.

Csató, L., & Tóth, C. (2018). A universal university ranking from the preferences of the applicants. arXiv preprint arXiv:1810.04087.

Dill, D. D., & Soo, M. (2005). Academic quality, league tables, and public policy: A cross-national analysis of university ranking systems. Higher education, 49(4), 495-533.

Kalaitzidakis, P., Mamuneas, T. P., & Stengos, T. (2003). Rankings of academic journals and institutions in economics. Journal of the european economic association, 1(6), 1346-1366.

Liu, N. C., & Cheng, Y. (2005). The academic ranking of world universities. Higher education in Europe, 30(2), 127-136.

Lynch, K. (2015). Control by numbers: New managerialism and ranking in higher education. Critical Studies in Education, 56(2), 190-207.

Merisotis, J. P. (2002). On the ranking of higher education institutions. Higher education in Europe, 27(4), 361-363.

Nagy, M., Molontay, R., Csabay, B. (2018). Predictive power of Admission Point Score and its Variants on Academic Performance, 2nd Danube Conference of Higher Education Management

Neuwirth, G. (2002). A középiskolai munka néhány mutatója: 2001. Országos Közoktatási Intézet.

Taylor, P., & Braddock, R. (2007). International university ranking systems and the idea of university excellence. Journal of Higher Education Policy and Management, 29(3), 245-260.

Telcs, A., Kosztyan, Z. T., & Toeroek, A. (2016). Unbiased one-dimensional university ranking–application-based preference ordering. Journal of Applied Statistics, 43(1), 212-228.

Usher, A., & Savino, M. (2007). A global survey of university ranking and league tables. Higher Education in Europe, 32(1), 5-15.

Developing the Supply Chain Management MA Program at Corvinus University of Budapest – improving the education program and implementing an assurance of learning system

Judit NAGY, Orsolya DIÓFÁSI-KOVÁCS

Abstract

The study aims to summarize the development of the education program and the quality assurance system of the Supply Chain Management Master (SCM MA) at Corvinus University. There were several motivating forces for development. On the one hand, the European Union has been granted a source of funding for education programs with dual training, which we wanted to use effectively. On the other hand, we wanted to build on the needs of our dual partner companies and, thirdly, the development was due to the AACSB accreditation.

The learning outcome-oriented development has been implemented in two compulsory, SCM MA-special subjects as pilots, and its results are very convincing. The Assurance of Learning (AoL) system can measure whether the graduating students meet the Training and outcome requirements or not, and is also suitable in AACSB accreditation. The opinion of dual partners was very useful and was considered both in course curriculum development and in AoL.

With this study, we would like to serve as an example for the education program development of other universities by reviewing the processes we have gone through.

1. Introduction

The paper aims to present the foundation and the process of the education development plan of a master program and the structure of the quality assurance model as practical evidence of a continuous development model.

The original, Logistics and Supply Chain Management specialization was founded in 1995, and adapting the Bologna system in 2010 it has been transformed first into Logistics Management later (because of legal and naming issues), from 2017, into Supply Chain Management Masters.

The program consists of compulsory, elective-compulsory, and elective courses. 21% of credits can be obtained by fulfilling courses, which are compulsory for all masters students in Corvinus Business School. These subjects concern essential financial, accountancy, legal and economics topics. An additional 14% of courses have to be chosen from a short list of elective-compulsory courses (Marked by letters in Figure 1): these subjects concern general leadership skills development and horizon-expanding knowledge. The remaining 65% (75 credits, which of the final thesis is 15) of credits belongs directly to the Supply Chain Management discipline, which we interpret in an extensive sense.

Student has to complete 12 courses specialized for SCM MA (marked with numbers in Figure 1), which of two deals with production, quality and lean issues, two with finance, controlling and performance management. One-one course occupies with corporate strategy and logistics law, and general logistics issues are covered by Purchasing, Strategic purchasing, Distribution, Logistics services and Logistics models. The whole program ends with the Supply Chain Management course, synthesizing all the knowledge captured during the master studies. This program has been renewed once, in 2014, when Logistics models and Logistics law was introduced.

Figure 1. Elective-compulsory and Specialized compulsory courses at SCM MA

Source: own edition

We have annually approximately 40-50 students graduating in SCM MA. We start it in every semester, and one group consists of 20-30 people; the dropout rate is quite low, 5-10%. During the decades, almost 1000 students have graduated in our old and new master program.

Since 2016, we start the program in dual education form, too. The government initiated this education form, and SCM MA was amongst the first master programs in Hungary, which worked out a special, unique system as well as started the program itself. In dual education, the University has an agreement with companies who hire interns from amongst our SCM MA students. The students have to fulfil their university obligations and do well at their workplaces, too. To help them harmonizing this, the courses are available for them form Monday to Wednesday, and on Thursdays and Fridays, they can go to work. In exam periods, students are free from work, but as they end up, they go back to the company. This way, the student is present at the university and the firm continuously and can adapt the materials he/she learns right at the time in his/her work. Partner companies agreed to assign their dual intern with tasks and projects relate to their studies, preferably rotate them in every semester to a fitting area in the organization. In every year, approximately 5-6 students enter the dual education form those whom we select at the entry exam.

In 2017, the University gained funds to improve education programs with dual education systems. The paper intends to present the development process initiated by the will to use the funds as effectively as possible. The paper is built up as follows: first, we discuss the motivations of development briefly, and then the steps we made as foundations for the development project. The development was carried out in two pilot courses, and the next section introduces the development itself and the experiences. Next chapter presents the assessment tool we developed to measure the learning outcomes at the end of the program. In the discussion part, we summarize our achievements in a SWOT

analysis and finally we draw the conclusion, which is briefly: development never ends, it is a cyclical process.

2. Development process

This chapter discusses the incentives for developing the SCM MA program. The main incentive was that the University won European Union funding for the development of courses with dual training programs, in which we became involved with SCM MA. We wanted to start using the support by basing it on the preliminary analysis and determining the necessary developments based on it. This way we have defined what kinds of new teaching materials we will need in renewed education program

On the other hand, we also asked our dual partners what their expectations were of a freshly graduated SCM MA student, and how they think whether they are currently meeting these expectations, what they need to develop in knowledge and skills that we must incorporate into the program.

Thirdly, the development was stimulated by the University's application for AACSB accreditation, which sets very high expectations for the monitoring of training and outcome requirements and assurance of learning.

2.1. Reviewing the Training and Outcome Requirements

The development of the Supply Chain Management Master program began in 2017 with an overview of the relevant training and outcome requirements (TOR, 2016). This project has also been awarded a development fund, and we needed to see whether there are gaps in the program or not. We first reviewed all the courses of the program and their alignment with the training and outcome requirements (knowledge, skills, attitude, autonomy). For an in-depth overview, we were interviewed with the leaders of the SCM-specialized courses (9 interviews), and we got a comprehensive view of what students learn during each course, what kinds of learning activities are performed by them, what the course improves in terms of knowledge and skills and how their performance is evaluated. We have reviewed all training and outcome requirements, combining its elements with each course, which resulted in a complex table about how the teaching materials, methods support the realization of TOR. As a conclusion, we defined what training outcomes the

different courses can influence and how they cover all the requirements expected from the program. Fortunately, we discovered that all the TOR are covered by the existing SCM MA-special course portfolio.

In order to improve the skills of students and to pass on knowledge more effectively, it was necessary to develop the way of transferring knowledge. To do this, we have chosen two subjects to carry out developments on a pilot basis. One of the two subjects was Distribution, and the other was the Logistics Services course (both belongs to the authors). During the development, we relied heavily on the staff of the University's Department of Pedagogy, on their advice, we regularly received training and participated in discussions with them. As a result of a half-year work, new course curricula were developed for the two subjects; detailed course descriptions were provided, detailing what the courses will deliver during the semester, what skills will be developed, and what kind of student activities will be undertaken. In the preparation of course descriptions, an important part was the development of a transparent performance assessment system, which reveals the activities performed by the students and shows the scoring of the tasks during the semester. This greatly improved the transparency of the two subjects. Pilot courses were taught in the spring of 2018, and both the instructors and the students had good experiences after the development, which was reported in the University-coordinated course evaluation questionnaires (HALVEL) at the end of the semester, and was also could be traced by the performance growth achieved by the students. All in all, the two developed course descriptions have been produced with transparent learning activities and assessment systems. All of these developments have been carried out in other special compulsory courses of the MA, and are currently being tested. Based on these developments, the need for new educational materials arose, in order to raise the educational quality to a higher level.

2.2. Interviews with the dual partners

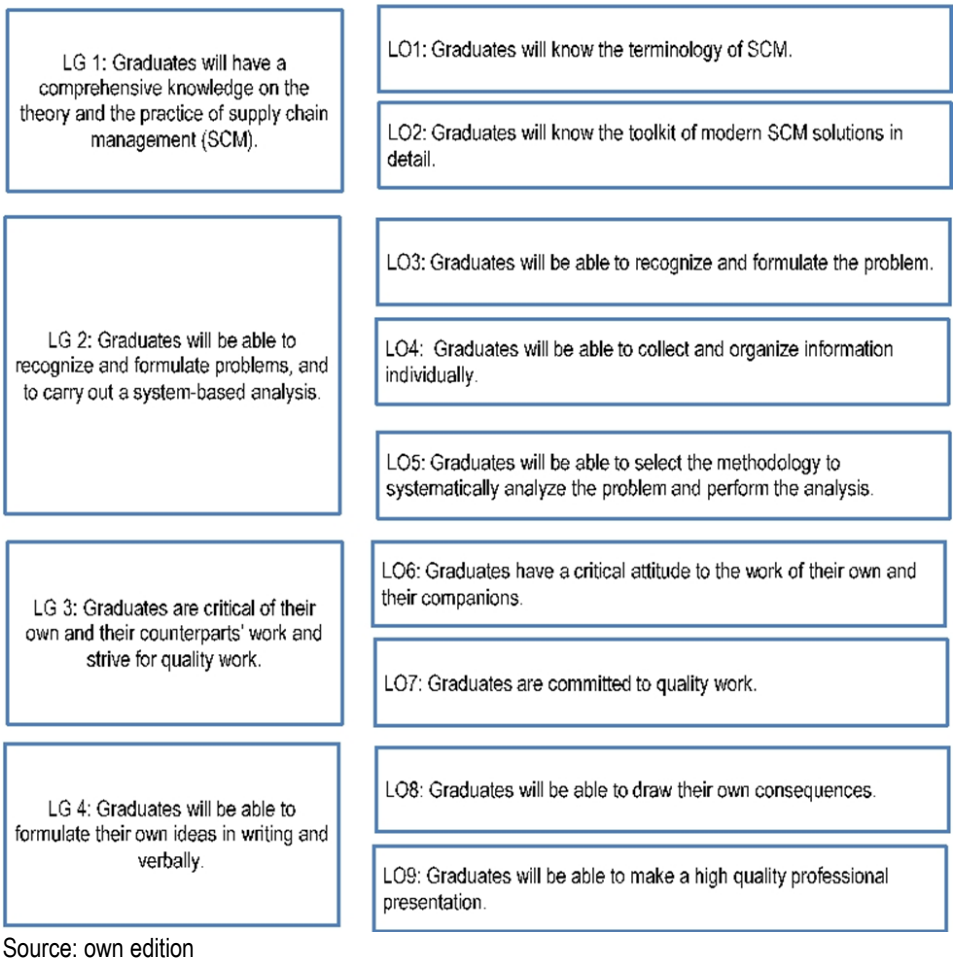
The second focus of our research was to meet the expectations of the dual partners. Due to the fact that the MA programme also starts in dual form, we asked the partner companies working with us in this dual education (3 companies employing 8 students in the dual form at that time), what knowledge and skills they expect from the fresh graduated Supply Chain Managers. We have determined these expectations and their match with the training and outcome requirements, and this way, we were able to set the direction of the development of the entire program as well as the courses.

The dual partners were satisfied with the knowledge provided during the MA, they emphasized the development primarily of the soft skills, mainly focusing on presentation skills and teamwork. At the same time, they regarded the students' professional skills good, they have got all the theoretical foundations, and the dual partners' task is to show them in practice. However, they expect fresh graduates to have an internal need for continuous learning and self-development.

2.3. Pressure because of AACSB accreditation

The third development initiator was that the university applied for AACSB accreditation, which required us to be very serious about the operations in education and the quality assurance system. In each program, we needed to look through the training and outcome requirements and a system was established to measure at the end of the MA whether or not students acquired the expected knowledge and skills. It was a huge and very complex task, and we had to rethink the main goals of the whole program. We have identified the four most important learning goals of the program and assigned two or three additional objectives to each learning goal. This has ultimately led to a quality assurance system that is capable of testing the fulfilment of training and outcome requirements. We have assigned two observable criteria to each of the nine objectives, for which a data collection and measurement system had to be built up. By continuously collecting the data on the 18 observable criteria (Figure 2) during the program and analysing the measures at the end, we could determine the performance of each student and the extent to which the outgoing students meet the TOR. This new system required a rethinking of the program to determine exactly what the goal of the education was and to assign clear measurement to it.

Figure 2 Assurance of learning system at SCM MA



Source: own edition

As a result of the process, the definition of student performance, the goals of the training and the measure of efficiency have become more transparent. The first test of the measurement was carried out in the spring of 2018 by examining the results of 20 randomly selected MA students, and based on these, we initiated developments. At the next measurement, in the summer of 2018, we used the improved system, e.g. we have fine-tuned the system and also modified some objectives. Using the summer experiences, we

have started new developments that will be cyclically performed (continuous development, Slack, Lewis, 2002) and delivering results to education development.

3. Results

In this section, we review the results of the development process. First, we summarize the achievement of the two Pilot courses. During the Logistics Services and Distribution courses, the development process has primarily helped to understand the relationship between training and outcome requirements, student activities and the assessment system: how important are they, how they can be built upon each other, interrelationship, and that transparency significantly increases student acceptance and effectiveness. The results of the pilot developments can be demonstrated both in the increase in student performance (final grade) and in the students' opinions on the course (Table 1).

Student performance was measured on a 0-100% scale, while the University organizes the course evaluation in a centralized way (HALVEL, 2017, 2018). The course evaluation process is carried out at the end of the semesters, and students are requested to fill in an online questionnaire about the course. They evaluate not only the teacher, the teaching material, but their attitude and student activities, too. The method of evaluation is to assess aspects on a 5-point Likert-scale, where 1 means totally disagree or bad answer, and 5 means absolutely agree or excellent opinion.

Table 1 Results of course development in course evaluation and student performance

	2017 spring	**2017 fall**	**2018 spring (PILOT)**	
	Distribution	Logistics services	Distribution	Logistics services
Course evaluation*	4.7 (24 responses)	3.95 (36 responses)	4.98 (28 responses)	4.95 (9 responses)
Student performance (%)	83%	83%	94%	91%

* average of 4 aspects on a 5-point scale (where 1=bad, 5=excellent)
Source: Own edition based on HALVEL data for 2017 and 2018

The experience was so favourable that, in the light of this, the development of other compulsory SCM MA specialized courses has also been carried out, and significant educational material development will be realized by 2020. The EU grant offers us to develop nine traditional case studies, eight cooperative cases with videos and interviews at companies, fourteen illustrations videos and 11 online and offline test bank and exercise book collections.

In the Assurance of Learning system, which measures the realization of TOR, we set out four substantial learning goals. The first of these is that students completing our program should have a comprehensive knowledge of the theoretical and practical aspects of supply chain management, and secondly that they can identify problems and formulate solutions and to implement a system-based analysis. Thirdly, students graduating in our program should be critical of their own and their colleagues' work and strive for quality work. Fourth, graduates must be able to formulate their own independent thoughts both in text and presentation form. These four goals were broken down into a further nine objectives, which were measured by two metrics. It can be stated that 36% of our students are over the expectation, 56% are average, and only 8% are below expectations.

4. Discussion

In the discussion, we would like to evaluate the results of the analysis carried out and to summarize the strengths and weaknesses of the development and the opportunities to exploit and threats to avoid. Our main *strength* during the development process was definitely that we were able to work in a very thoroughly structured course structure, so we do not have to think about whether our subjects are in the right place. The development team had a great deal of belief in the work, and the Pilot subjects' instructors were both committed to the improvement. The pedagogical support and training provided by the Department of Pedagogy to the team to guide the development in the right direction were essential. In such a development, it is crucial to have committed management, engaged to change. During the development, the views and feedback of the dual partners were very useful as they are the ones who employ our students and their expectations fundamentally influence the students' success in work and the labour market.

The attitudes of colleagues in the second phase of the development have been revealed as a *weakness* because unfortunately, not everyone is thinking service-oriented and student-oriented, when redefining a course. Although development has been done in every SCM MA-special compulsory courses, in practice, it is not realized as it should because many colleagues stick to their old teaching methods. We also formulated as a

weakness that the colleagues, who teach management, does not have pedagogical qualifications (just like in many other management education fields) that are very lacking when it comes to thinking about student activities and evaluation systems, or the amount of credit equivalent to work.

We see an as *opportunity* that, due to AACSB accreditation, these developments had to be carried out, and so it was organized with pedagogical support. It is also a great opportunity to provide a framework to use EU funding effectively to develop high-quality teaching materials. Another possibility is that the students gave excellent feedbacks after the courses, so they experienced the benefits of the developments.

We have identified as a *threat* that there is always a danger that the ourse leader will return to his/her well-established, old teaching routine and use obsolete, not necessarily student-oriented, and not the most modern methods. Another threat is that these new learning outcomes oriented teaching methods, class materials, and most importantly, the evaluation system requires much more effort from the instructor, which may not be convenient for all instructors.

5. Conclusion

Our achievements are that we could develop the MA program based on comprehensive research and could find developing methods and tools that best serve our students' knowledge and skills. The success of this was examined through an Assurance of Learning quality assurance system, which we develop continuously. The outlined model can be a useful example for other Universities to analyse and develop their higher education programs systematically.

The study concludes with the following conclusions. An education program is essential to meet the training and outcome requirements, and it is necessary to harmonize these and the courses performed during the education program, regularly. It is crucial to define the learning activities through which we pass knowledge, develop skills, and an evaluation system that meets these training and outcome requirements. It is also true, however, that such a development process takes a long time and requires very close cooperation between the teachers involved in the higher education program to become a continuous development activity. Learning outcome-based education requires a new approach and attitude from the instructors: this is service orientation and student orientation. Managerial support, reconciliation of different perspectives and the internal need for development are essential to the success of the development. Corporate feedback was also a great help; it broadcasted market impulses, which, in our case, was

the feedback from dual partners. We also started to develop in a lucky time, because we were able to do this with financial support, and therefore we have the opportunity to develop an abundant teaching material that can significantly increase the quality of our education program. The most important lesson of development was that this development never ends; it is a cyclical process that we will have to do over and over again, every few years.

References

HALVEL Student course evaluation (2017 and 2018). Corvinus University of Budapest, internal database. *Available at:* http://halvel.uni-corvinus.hu/index.php?lang=en&page=kezdo&PHPSESSID=a32d2979ee3d48cd2d663daffe33c4a9

Slack, N. and Lewis, M. (2008): *Operations strategy*. Harlow: FT Prentice Hall

Training and Outcome Requirements (TOR, 2016): Decree of the Ministry of Human Resources. *Available at:* https://net.jogtar.hu/jogszabaly?docid=A1600018.EMM&timeshift=20160813&txtreferer=00000001.txt

Subjective factors of course evaluation. Can we rely on undergraduates' opinion?

Annamaria KAZAI ÓNODI

Abstract

Quality assurance processes in higher education have become increasingly common in Europe and have a crucial role in improving the quality of Hungarian education. In addition to numerous tools, group evaluation by students is an essential element in achieving this goal. Universities have to pay more attention to undergraduates' satisfaction, so course evaluation has become a valuable information source. However, can we completely rely on undergraduates' feedback? What kind of distortion factors shall we face? In order to address this question, we have compiled a database using the Business Economics course evaluation of 2174 students at the Corvinus University of Budapest during three semesters. In the first step, we investigated the relationships among the factors of the course evaluation. In the second step, we analysed the influence of the subjective factors, like average marks and teachers' characteristics on overall student satisfaction. We collected this information from other databases. The regression analysis confirmed that student satisfaction has inexplicable elements, although seminars and seminar leaders had the most significant impact.

1. Introduction

Improving the quality of higher education and quality assurance have become more and more critical. The World Bank (2010) compared different approaches to quality assurance in higher education and compared the practices of seven countries. Among other vital statements, they highlighted that quality assessment should focus on quality assurance processes and internal quality assurance procedures are crucial elements. For the further literature review, see Wilger, 1997; Nicholson, 2011.

Although we do not intend to dispute pros and cons of the "student as customer" concept (see Eagle, Brennan, 2007) it is essential to emphasise that students are one of the most important stakeholders of higher education. Several authors highlighted the importance of students' participation in the quality assurance process (see Aquairo, 2009; Stalmeijer et. al. 2016). Our starting point is that we cannot be satisfied with the quality of education if one of the main stakeholder groups, the undergraduates are not satisfied with it, regardless of how we define the purpose of higher education.

Student satisfaction is influenced by the teaching and non-teaching services as well (see Petruzellis at al. 2006; Yusoff, 2015; Dean, Gibbs 2015). In our research, we concentrate only on teaching services that can be influenced by the instructor team. Thus, we do not investigate infrastructure, classroom environment, class size, internet access, leisure, relationship with non-teaching staff, administrative services, international relationships.

At first, we introduce the quality assurance processes in the Business Economics course in this paper. One element of the applied system is the course evaluation. Our research question: Can we completely rely on undergraduates' feedback? What kind of distortion factors do we face? These questions are relevant for several reasons, for example, improving subjects and teacher assessment based on students' feedback. In order to address these questions, we have compiled a database using the Business Economics course evaluation of 2174 students at the Corvinus University of Budapest during three semesters.

2. Quality assurance in Business Economics

Business Economics is a compulsory course at the Corvinus University of Budapest. More than 1000 undergraduates learn the course per term. The course is based on Chikán, (2003, 2008, 2017) Vállalatgazdaságtan (Business Economics) textbook. For a detailed description of the fundamentals of the course, see Chikán, Czakó, 2018.

Due to the high number of seminars and seminar leaders, it was necessary to introduce an internal quality assurance system in addition to external accreditation quality assurance. Education quality is highly dependent on well-trained, motivated teachers and consistent, high-quality curriculum. The paper does not deal with the broader context of quality assurance (for example course structure, the selection process of professors, syllabus). We focused only on quality assurance built into the educational process, which has four main elements: kick-off and mid-term meetings, visiting seminars, course evaluation, summary meeting. (For a detailed description of the quality assurance system, see Czakó, Kazainé 2017).

Undergraduates' feedback is a crucial element of quality assurance. It has different forms: mid-term instant and spontaneous feedback, end-of-term formative assessment, University evaluation system (HALVEL) and in-house course assessment. In-house course assessment is used for course development. It contains six main question blocks: (1) basic information, course selection criteria; (2) lectures; (3) seminars; (4) textbook (5) general satisfaction; (6) institution, supporting activities. The online questionnaire is completed anonymously. Each seminar leader immediately can see his/her student evaluation. In addition, we prepare the aggregate course evaluation, which provides information for leadership feedback, means input for summary meeting and setting development priorities, and provides a database for further analysis. Student feedback helps to choose observation aspects when visiting seminars and provides input for course development. However, student evaluation may include many subjective elements. If the student is offended, he/she might give a 1 or 2 rating on a 5-grade scale. The evaluation may also be distorted in the case of a favourite teacher as well. Overall, student feedback is critical, it directs attention to problems and weak points, but no leadership decisions can be made on this bases alone.

3. Research method

More research focused on influencing factors of student satisfaction (see Yusoff, 2015; Dean, Gibbs 2015). Although previous research pointed out the impact of infrastructure, education organization, and support activities on student satisfaction, our research focused only on the direct education process within the competence of the Institute. The Business Economics course is based on three main pillars: textbook, lectures, seminars. The purpose of the research was that whether we can completely rely on undergraduates' feedback or not. What kind of distortion factors do we face in connection with it? We set two hypotheses.

H1: Undergraduates' satisfaction with the course does not depend only on factors determined by educators (quality of lectures, textbook, and seminars).

H2: There is no such factor independent of the education process that significantly influences student satisfaction.

To test our hypotheses, we have compiled a database of 3-semester in-house course evaluation (2015-2017). It contained 2 174 undergraduates' opinion. We used regression analysis (Backward method), correlation analysis and cluster analysis. We wanted to confirm whether gender or educational experience of seminar leader has an impact on student satisfaction or not. In addition, we would like to investigate the effect of students' self-evaluation and average marks on overall satisfaction.

As the course evaluation is anonymous, we have to compile a new database to link information from different databases (in-house course assessment, Halvel, Neptun). The new databases consist of 81 items (seminar leaders' group average in the three investigated semesters.) We used regression analysis (Backward method), correlation analysis and cluster analysis.

4. Findings

4.1. The most important influencing factors

Since the three main pillars of teaching Business Economics are lectures, seminars and the textbook, we supposed that these factors have the highest impact on student satisfaction. According to correlation analysis, the seminars have the most powerful effect (55.4%), this is followed by lectures (38.8%) with almost the same effect as the textbook (37.1%). We applied regression analysis to test our hypothesis that satisfaction with seminars, lectures and the textbook jointly explain the degree of general satisfaction with the course. The adjusted R square of the regression model was 0.376, which is not so good. Beta values underpinned our previous statement that seminars have the most substantial effect (beta: 0.378). In connection with the textbook (beta: 0.161) and lectures (0.104), we get a slightly different result.

We would like to understand better this phenomenon, so we made a cluster analysis involving the factors examined so far. 54.2% of students belong to „Outstanding" clusters, where the average rate was over four in each category, the highest satisfaction was with the seminars (4.77), the lowest with the textbook (4.07). Nearly a quarter of students belong to „Do not like lectures" cluster. The average satisfaction with seminars was high (4.67) but the satisfaction with lectures was quite low (2.65), nonetheless the average satisfaction with the course was over four. In the case of "Do not like textbook" cluster, the students were not satisfied either with lectures (2.49) nor with the textbook (1.87), the general satisfaction was higher due to the satisfaction with seminars (4.06). Less than

10% of students belong to ""Do not like seminars" clusters, where students were dissatisfied with seminars (2.51). The general satisfaction with the course was the lowest (3.32) in this cluster (See table 1) The cluster analysis confirmed that all three investigated factors have an impact on general satisfaction, but we cannot create an appropriate mathematical model for the relationships.

Table 1 General satisfaction with the course – results of cluster analysis (final cluster centers)

Satisfaction with	"Outstanding cluster" (n=1025, 54,2%)	"Do not like lectures" (470, 24,9%)	"Do not like textbook" (n=215, 11,4%)	"Do not like seminars" (n=181, 9,6%)
Lectures	4.48	*2.65*	2.49	3.66
Seminars	**4.77**	**4.67**	4.06	2.51
Textbook	*4.07*	3.84	1.87	3.65
Course	4.46	4.21	3.48	3.32

Since all three applied method (correlation, regression and cluster analysis) highlighted the crucial role of seminars, we investigated the satisfaction with seminars more deeply. All investigated factors have a significant impact on general satisfaction with seminars (see table 2). "Interesting characteristics of seminars" and "Seminar support for students to acquire the course material" have the most substantial effect.

Table 2 General satisfaction with seminars – correlation analysis (n=2154)

	General satisfaction with seminars
Interesting characteristics of seminars	,772**
Seminar support for students to acquire the course material	,709**
Seminar leaders pointed out essential correlation and practical applications	,657**
A good relationship between the seminar leader and the students	,612**
Clear explanation	,611**
Supporting critical thinking	,544**
Seminar leader's preparedness	,536**
I have learned a lot from preparing homework	,524**

**. Correlation is significant at the 0.01 level (2-tailed).

General satisfaction with the seminars can also be explained well by a regression model (Adjusted R square: 0.715). The four most important factors are: „Interesting characteristics of seminar" (beta: 0.355) "Seminar support for students to acquire the course material" (beta: 0.237) "Good relationship between the seminar leader and the students" (beta: 0.122), Seminar leaders pointed out essential correlation and practical applications (beta:0.121).

4.2. Other influencing factors

We supposed that the seminar leaders' professional knowledge, teaching methodology and relationship with students are the key factors. In addition, we tested some other available characteristics of seminar leader on student satisfaction by correlation and regression analysis. In the case of gender, there was no significant correlation and it was excluded a variable from the regression analysis.

Seminar leaders were grouped according to their teaching experiences. Ph.D. students belong to the first group. Teaching assistants with a few years of teaching experience belong to the second group. Colleagues with more than five years of experience belong to the third group and senior colleagues belong to the fourth group. In the case of teaching experience, there was no significant correlation, and it was excluded a variable from the regression analysis. The results confirmed our previous statements derived from visiting seminars, young teachers, due to their enthusiastic could reach high student satisfaction as well as middle-aged or senior colleagues. The time spent in education does not have such a substantial impact on student satisfaction as other factors. The question often arises whether marks affect student satisfaction or not. Since the first analysis indicated a significant correlation between them, deeper analysis was conducted.

4.3. Student satisfaction and marks

Investigating the relationship between average marks and student satisfaction is a challenge in many aspects. Since the evaluation was anonymous and the marks derived from Neptun database, we had to compile a new database. The new database consists of 81 items. Each item shows the seminar leaders' group average over three semesters.

Even though the correlation analysis indicated a middle-strong correlation between average marks and satisfaction with seminars (,538) and between average marks and

general satisfaction with the subject (,543), the causal relationship is not evident. There are two different explanations for the medium-strength correlation. There is an excellent teacher who motivates undergraduates appropriately. Students will receive good marks for their excellent work, and they will also be happy with the seminar leader and course. The other explanation could be that the teacher is permissive and the undergraduates are satisfied with him because they can easily get a good mark. In this case, the mark could be a distortion factor in the evaluation of teachers.

For a more in-depth analysis we conducted a cluster analysis. Variables based on cluster analysis were not just "Satisfaction with the seminar" according to in-house course assessment, and average group mark derived from Neptun database, but "Students' self-evaluation" according to in-house course assessment and "I learned a lot from my seminar leader" derived from HALVEL database. Three clusters were identified. 47.5% of the courses belonged to "Excellent" cluster, where the student satisfaction was very high according to in-house course assessment as well as HALVEL, the average group marks and the students' self-evaluation were the highest compared with other clusters. It is assumed that the groups of teachers are more stringent than the average belonged to „Satisfied" cluster. In this cluster, the average marks and the rate of self-evaluation were lower than in the „Excellent" cluster. The student satisfaction was high but significantly lower than in the „Excellent" cluster. Good marks may distort teacher ratings upwards, but the „Satisfied" cluster showed that students willing to give a good rate to teachers independently of their own performance. "Average" cluster represents those courses where the rate of students' self-evaluation is higher than the rate of seminar leaders evaluation. These are the courses the students were not satisfied with.

Table 3 Average marks and student satisfaction – results of cluster analysis (final cluster centers) (n= 80)

	"Excellent" n=38, 47.5%	"Satisfied" n=32, 40%	„Average" n=10, 12.5%
Satisfaction with the seminar (group average)	4.68	4.31	3.44
"I learned a lot from my seminar leader" (HALVEL)	4.65	4.29	3.24
Average group marks	4.1	3.53	3.46
Students' self-evaluation	4.16	3.87	3.67

5. Conclusion

Undergraduates' feedback has an important role in the quality assurance process in higher education. The degree of student satisfaction with seminars can be well explained by teaching methodology, quality of education, and the relationship between the seminar leader and the students. Based on our research, we can suggest that seminar leaders should focus on two main goals in parallel to achieve student satisfaction. These goals are exciting characteristics of the seminars and seminar support for students to acquire the course material. Consciously designed lesson plan and appropriate time management are needed to achieve these two goals in the meantime. Satisfaction with seminars has the highest impact on general satisfaction with the course. In addition, the significant impact of the textbook and lectures on student satisfaction were confirmed, but we cannot create an appropriate mathematical model to explain the relationships. The question often arises which factors can distort student feedback. Grading could be a potential distortion factor. We found a middle-strong correlation between average marks and student satisfaction. Cluster analysis confirmed that students willing to give a good rate to the teachers independently from their own performance, but the distortion effect of grading could not be denied. Overall, course evaluation is an important but not the only element of quality assurance. Leadership decisions should not be made on this basis alone.

References

Aquario, D. (2009): The Active Participation of Students in Teaching Evaluation Processes within Universities. In A. Lazinica and C. Calafate (Eds.) Technology Education and Development (pp. 39 -56). https://www.intechopen.com/books/technology-education-and-development/the-active-participation-of-students-in-teaching-evaluation-processes-within-universities (Downloaded 30.12.2018)

Chikán, A. (2003): Vállalatgazdaságtan. Aula Kiadó 2005

Chikán, A. (2008): Vállalatgazdaságtan. Aula Kiadó 2008

Chikán, A. (2017): Vállalatgazdaságtan. Vállalatgazdasági Tudományos és Oktatási Alapítvány, Budapest

Chikán, A. and Czakó, E (2018): Az üzleti vállalkozás társadalmi tevékenység – avagy Kornai János munkássága és a vállalatgazdaságtan. Köz-Gazdaság 2018/1. pp. 91- 98.

Czakó, E. and Kazainé Ónodi, A. (2017): Egy oktatás- és oktatásfejlesztési rendszer – avagy minőségmenedzsment egyetemi intézeti keretek között. Magyar Minőség XXVI. évf. 11. 2017. november. pp. 64 – 69. (https://quality-mmt.hu/wp-content/uploads/2017/10/2017_11_MM.pdf

Dean, A. and Gibbs, P.: (2015): Student satisfaction or happiness? A preliminary rethink of what is important in the student experience. Quality Assurance in Education Vol.23 No.1, 2015 pp.5-19

Eagle, L. and Brennan, R.: (2007): Are students customers? TQM and marketing perspectives. Quality Assurance in Education Vol. 15 No. 1, 2007 pp. 44-60

http://dx.doi.org/10.1080/02602938.2014.976760 (Downloaded 06.08.2017)

http://web.stanford.edu/group/ncpi/documents/pdfs/6-03b_qualityassurance.pdf (Downloaded 06.08.2017)

https://pdfs.semanticscholar.org/2bd6/df15d930799193a6633679ba3ec5ea14891f.pdf (Downloaded 30.12.2018)

Nicholson, K. (2011): Quality Assurance in Higher Education: A Review of the Literature. http://cll.mcmaster.ca/COU/pdf/Quality%20Assurance%20Literature%20Review.pdf Downloaded at 06.08.2017

Petruzellis, L et al. (2006): Student satisfaction and quality of service in Italian universities Managing Service Quality, Vol. 16 No. 4, pp. 349-364.

Stalmeijer, R - Whittingham J., Grave D. - Dolmans D. (2016) Strengthening internal quality assurance processes: facilitating student evaluation committees to contribute, Assessment & Evaluation in Higher Education, 41:1, 53-66, DOI:10.1080/02602938.2014.976760

The World Bank (2010): Quality Assurance in Higher Education: A Comparison of Eight Systems. Europe and Central Asia Knowledge Brief 2010. nov. Volume 35. http://siteresources.worldbank.org/INTECALEA/Resources/ECA_KB35_Quality_Assurance_in_Higher_Education.pdf (Downloaded 06.08.2017)

Wilger, A.: (1997): Quality Assurance in Higher Education: A Literature Review. National Center for Postsecondary Improvement

Yusoff, M. (2015): Dimensions driving business student satisfaction in higher education. Quality Assurance in Education Vol.23 No.1,2015 pp.86-104

Perspectives on Teachers' Professional Development and Quality Teaching

Taisia MUZAFAROVA

Abstract

This paper explored the understanding of quality in higher education and revealed the inconsistencies between the views of those in administration and teaching. The paper proposed the objectives for closing this gap with the efforts of both groups.

More attention was paid to the personal, professional, and institutional goals discussed with quality managers and teachers to reveal the perceptions and attitudes towards the professional development activities targeted at enhancing the quality of teaching. Semi-structured interviews were conducted in order to collect the experiences of teachers and quality managers at a private higher education institution in Tbilisi, Georgia.

The results of the interview showed the perception of quality management by teachers as often limited to administrative tracking and record-keeping; although these were mentioned as useful control mechanisms teachers agreed that the process lacked substantial elements on checking how the objectives transferred to immediate classroom activities.

This paper established the foundation for understanding the different perspectives on teachers' professional development activities

1. Introduction

Quality management and teachers' professional development are two fundamental facets of faculty improvement in higher education. Though having similar goals, these two processes are often imbalanced. This paper explored the understanding of quality in higher education and revealed the inconsistencies between the views of those in administration and teaching. The paper proposed the objectives for closing this gap with the efforts of both groups.

Literature refers to schools as the agents of their improvement (Elmore, 2002) and teachers as the agents of change (Day, 1999) underlining the inevitability of teachers' responsibility for the progress (Fullan, 1993). Teachers are reacting to immediate needs and implementing transformative practices in daily teaching activities. Existing research suggests that transformative practices usually address teachers' initial education; the responsibility to address the current demands in on teachers in the immediate practice, those who have the first-hand contact with students.

Day (1999) defines professional development as "all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school and which contribute, through these, to the quality of education in the classroom" (p. 4).

Elmore (2002) defines teachers' professional development as any routine course of the work that occurs after a teacher is on the job, thus, distinguishing it from teachers' pre-service education. Due to its complex nature, professional development incorporates a vast number of aspects, whether it is formal or informal, short or extended, planned, unplanned, emerging from practice, centralized or decentralize, organized according to the disciplines or interdisciplinary, organized in groups – professional association, collaborations, communities of practice, peer partnerships, or individual, targeted at a variety of national, institutional, and personal goals. Standards for professional development are often defined by policymakers distant from the immediate teaching practice and the process itself often treated as a mere bureaucratic procedure. Educational institutions are expected to reach the predefined standards at the expense of a holistic professional development leaving individual teachers responsible for the quality of their work (Solbrekke & Surgue, 2011).

The research on professional development is rarely based on observational and experiential evidence about the effects of the practices. Studied literature suggests measuring these effects through the evaluation of student learning. According to American National Staff Development Council (1995) effective professional development can be

measured through improvements in students' performance, which in its turn, can be achieved through the improvement of teachers' skills and knowledge. Numerous studies (Charlier, n.d.; Elmore, 2002; Guskey, 2002; Guskey, 2003; Ramsden, 2003; Fullan, 2006; Brew, 2007; Chalmers, 2008) suggest that the effects of professional development can be measured by the impact it has on student achievement. Elmore (2002) highlights the necessity of continuous context-specific professional development with a consistent flow of short-term goals. Measurement of effectiveness should not be based on the broad general statements on student achievement; instead, it should focus on the difficulties encountered by real students in real classrooms (p. 7). Ramsden (2003) evaluates the effectiveness of the practices through the impact that derives as a result of these practices. Guskey (2003) supports the idea defining instruction as the most effective form of professional development due to its immediate contact with the students that provide feedback on the practices, therefore enabling teachers to select those leading to desired outcomes and drop the rest.

Nevertheless, the connection between teachers' knowledge and skills acquired through professional development and overall improvement of student performance is very weak (Elmore, 2002). Existing professional development activities are designed to have an immediate effect on the practice, while particularly ignoring the long-term investment into organizational change.

To understand professional development at universities, it is important to revise the concept of quality from various perspectives and at each stage of the professional development process. The notion of quality management has derived from the sphere of business, as more and more higher education institutions adopt business-like models of organization. Cruickshank (2003) presents an international literature review followed by the particular review on cases in Australia on the application of TQM (Total Quality Management) models in higher education, highlighting the importance of improved management process.

Livingston (2012) discusses the lack of clarity and agreement in the definitions and purposes of professional development; she highlights the importance to establish the relation between the purposes and needs of teachers as the only way to achieve meaningful quality. OECD (2005) suggests the following purposes of professional development:

- to facilitate the implementation of a policy or educational reforms;
- to prepare teachers for new functions;
- to meet school needs and further school development;
- to undertake personal, professional development chosen by individuals for their enrichment (OECD, 2005, p. 122 as cited in Livingston, 2012).

Chalmers (2008) suggests four types of quality indicators that can be broadly categorized into two quantitative and two qualitative indicators: quantitative – input and output, qualitative – outcome and process (p. 4-6):

- Input indicators stand for the human, financial, and physical resources involved in supporting institutional, professional development
- Output indicators reflect that quantity of outcomes produced as immediate, measurable results and direct consequences of implemented activities
- Outcome indicators focus on the quality of the program or activity and help to measure its impact
- Process indicators describe how professional development activities were implemented within the institution. It provides the context for interpretation of output and outcome indicators.

Professional development plans designed by institutions seldom go beyond a systematic collection of teachers' activities over the defined period, which has no specific focus related to an overall strategy of the institution (Chalmers & Gardiner, 2015; Little, 1993). Staff development moved away from the purpose of enhancing the teaching and learning process towards a routine activity within bureaucratic systems (Elmore, 2002; Webster-Wright, 2009; Solbrekke & Surgue, 2011). Professional development as a tool for control and standardization imposed top-down neglects teacher motivation and implicit reasons to engage in professional development (Charlier, n.d). Webster-Wright (2009) explains the diversity and complexity of teachers' professional development and advises to support it through the application of teachers' personal experiences.

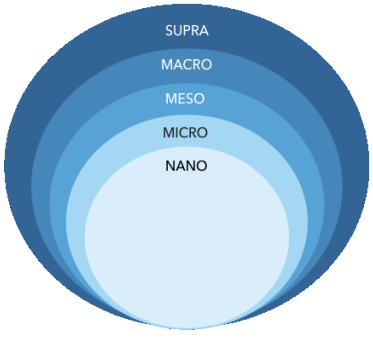
2. Methodology

In light of the above, this research focused on personal, professional, and institutional goals to reveal the perceptions and attitudes towards the professional development activities targeted at enhancing the quality of teaching. In particular, the research aimed to unfold the views of teachers' and quality managers on the meaning of quality and the constituents of formal professional development. It is important to note that the terms "teacher" and "teacher educator" are used interchangeably in this study due to no specific distinction between the two in the context where the research was conducted.

A semi-structured interview was conducted with six teacher educators and two quality managers at a private higher education institution in Tbilisi, Georgia. The interviews were recorded with the consent of the participants; the recordings were manually transcribed. The transcripts underwent the processes of coding, condensation, and interpretation of meaning (Kvale, 1996). The categories emerged from the literature review on the topic and

focused on *factors* defining teachers', and QMs' perceptions of quality and the levels were the relevant activity was induced or introduced. The following categorization of the levels was applied to the meaning of condensation (Figure 1).

Figure 1 Various levels of professional development and quality management



The following level differentiation was applied:

- nano – personal, individual
- micro – class, faculty, collective
- meso – university, collective
- macro – national context
- supra – international context

The interview questions were categorized into goals, outcomes, progress, personal gains, teaching and learning, expectations.

3. Findings

The findings of the research are organized intro subchapters according to the themes of the interview questions. Each paragraph is designed to adduce the answers of the quality managers (QM) and teacher educators (TE) at the given university.

3.1. Goals

Quality managers associated the goals of professional development with the fulfilment of external accreditation and authorization requirements through evaluation of the university's educational, scientific, and research work. The goal of the process was to enhance the mechanism and develop recommendations (often based on the external accreditation review) about quality improvement. Teacher educators had a more personalized attitude towards professional development; teachers linked it with the necessity to continuously develop skills, update and upgrade knowledge in the field. Teachers found *capacity building* a crucial aspect of improving work efficiency and catching up with modern trends. Nevertheless, teachers had an established connection between their practice and the goal beyond it – "universities…serve the country, so if we don't develop ourselves professionally, we won't be able to raise the new generation as professionals" (TE6).

3.2. Outcomes

At the university under study, the progress of teachers' professional development is measured and reported through a set of quantitative tools: surveys, reports, questionnaires. Teachers considered the existing system as a necessary stimulus, knowing the obligation to report on the undertaken activities kept teachers focused and organized – "even internally motivated people sometimes postpone their professional development…[but] they know at the end of the year they are assessed – it is a stimulus to do a couple of things over the year" (TE5).

Quality managers, on the other hand, found the reporting system effective to keep the necessary documentation crucial for accreditation and authorization processes at the university. The analyses of the reports also served as the basis for the development and adjustment of the institutional policy and elaboration of the relevant amendments.

3.3. Progress

Quality managers measured the teachers' professional development progress through the quality of the classes they deliver; every semester, QM monitored students' attendance in the class and their activity on online learning platforms. Students regularly filled in the course evaluation questionnaires and satisfaction surveys. Teachers also found students' feedback important; teachers admitted to adjust the course and develop necessary skills in the progress of the course according to the needs of their students. Nevertheless,

teachers also mentioned other means of measuring their professional progress, such as producing journal articles, participating in research projects and several cases, use "nothing formal" but self-reflection (TE4).

3.4. Personal gains for teachers

Quality managers did not consider teachers' personal gains to be related to professional development and practice, moreover, in some cases development of a program was considered disconnected from the development of a teacher as a professional – "working with teachers' professional development is not our direct goal but we are working with the development of the programs" (QM2).

Teachers, on the other hand, found higher motivation and confidence in teaching the direct personal gains from their professional development; the more substantial gain was finding solutions to practical problems in classes, and in some cases beyond the professional practice:

> "I use many things for my children; teaching techniques, dealing with adolescent years, how to approach [them], how to assist so not to be seen that I am assisting…" (TE4).

Teachers also mentioned the development of the personal attachment to the institution as one of the gains of the well-established professional development mechanism – "when university organizes [professional development] events for free, and in work time it stimulated the development of institutional loyalty" (TE5).

Teaching and learning

Both quality managers and teacher educators agreed on the importance of quantifying the progress to increase overall institutional quality in teaching and learning – "Quality management and quality assurance, we need to have these kinds of procedures, so we come up with certain measurable data" (TE3). Measuring the development and keeping the log of the activities was confirmed to be one of the practical tools for reflective teaching.

Quality managers reported to take up the roles of overarching 'supervisors' of the quality teaching and learning at the university – "QA serves not only as detectors of the problems and challenges but at the same time supporters for academic staff as well as

administrative staff to make the processes go smoother" (QM2). Nevertheless, one of the teacher educators agreed on the supervisory role of QM though expected the expanded area of influence:

> "That [quality teaching and learning] might not be their direct obligation to develop certain activities, but they could be offering certain ideas, they could be identifying positive practices at university…so that there is a common policy, a common practice for the whole university" (TE3).

Another teacher educator reported motivation to grow at the main result of professional development activities targeted at improved teaching and learning, and stressed the importance of establishing a personal connection with students to become a better teacher:

> "…you care about them [students] as personalities…you are not telling the same story for twenty years, you are modifying the story…their motivation to learn increases, their quality of knowledge increases" (TE5).

Expectations

Quality managers expressed their willingness to develop a 'more systematic approach' to enhance teachers' professional development. They also agreed that the teachers must be actively involved in quality management activities and be the main initiators of innovation for quality teaching.

Teacher educators discussed a range of factors that would improve the quality management and professional development at the university ranging from capacity building to smaller, more personalized aspects. The following recommendations for improving teachers' formal professional development activities were articulated:

- increased flexibility in choice and attendance
- increased academic incentives
- balanced workload
- adjusted performance measurement
- feedback and follow-up
- increased (formal) teacher collaboration
- shared leadership
- increased frequency and duration
- introduction of new techniques, such as peer-observation, teacher contests, etc.

Teacher educators expect to be offered "more tailored training for people with different skill-sets instead of one-size-for-all training" (TE1). Nevertheless, teacher educators expressed the sense of ownership of their professional development and were willing to take up the leading roles in it – "don't expect that all your needs will be solved by the administration, because the administration does not know exactly what you want, what you need, you should be the initiator" (TE5).

The following table was designed to categorize the factors influencing teachers' professional development on each level according to the themes discussed during the interview.

Table 1 Perspectives on teachers' professional development and quality teaching: factors and levels

Themes	***Factors***	***Levels***
Goals	QM: satisfaction of internal and external requirements TE: pedagogical knowledge, content knowledge, technological knowledge	QM: meso TE: macro, meso, micro, nano
Outcomes	QM: internal/external documentation TE: internal documentation	QM: meso TE: micro, nano
Progress	QM: documentation, monitoring, interviewing, student satisfaction TE: student satisfaction, self-reflection, research and publication	QM: meso TE: meso. micro, nano
Personal gains	QM: incentives, student achievements, knowledge development TE: confidence, motivation, loyalty	QM: meso, micro, nano TE: meso, micro, nano
Teaching and learning	QM: institutional achievements, administrative procedures TE: reflective teaching; research, implementation, dissemination	QM: meso TE: macro, meso, micro, nano
Expectations	QM: teacher involvement, systematic approach TE: filling the gaps in administrative processes and institutional capacity, teacher initiative	QM: meso TE: meso

The results of the study display the inconsistencies in the target levels were quality management, and professional development occurs. The quality management is focused

on meso level, having the whole institutional gains as a goal; while teachers' professional development often relies on more individualistic, personal approaches and small stakeholder groups (students) on meso, micro, nano levels.

Teachers and quality managers share the views on the importance of documenting the processes of professional development; student satisfaction and teachers' involvement in research and publication are also mentioned as crucial factors by both groups. Nevertheless, quality managers tend to focus more on keeping up with the bureaucratic administrative procedures targeted as the satisfaction of internal and external requirements. Teachers, on the other hand, develop more abstract features such as self-reflection, reflective teaching, confidence, motivation, loyalty, sense of community, sense of ownership.

4. Conclusions

There is inconsistency in the levels where professional development occurs. National policy often presents a broad view of professional development and defines its goals. Institutions then invest in context-specific goals derived from the broad national policy; while teachers' professional development usually happens on an individual, often personal, level. The bottom-up approach where educators set goals for themselves and their institutions and determine the focus of professional development suggests the difficulty to alight those to the nation-wide accountability, which in its turn, hinder the standardized measure of development. Decisions about professional development that are based mainly largely based on personal goals are disconnected from the collective knowledge and sharing of the best practices.

Same applies to the perception of quality; teachers refer to the quality of their teaching and set the goals accordingly, while institutions perceive quality as an organizational goal thus creating a tension between institutional evaluation and individual practices and development. A conclusion can be made that each group is performing the necessary actions on their niche; overlapping and intertwining the established practices, as well as the application of the new innovative methods suggests to increase the effectiveness of quality management for teachers' professional development.

References

Brew, A., (2007). Evaluation of academic development in a time of perplexity. *International Journal for Academic Development, 12*(2), 69-72.

Chalmers, D. (2008). *Teaching and learning quality indicators in Australian universities.* Paris: OECD.

Chalmers, D., & Gardiner, D. (2015). The measurement and impact of university teacher development programs. *Educare, 51*(1), 53-80.

Charlier, B. (n.d.). *Professional development and enhancement of the teaching quality: How to integrate individual and institutional actions?* Fribourg: University of Fribourg.

Council, N. S. (1995). *National Staff Development Council's Standards for Staff Development.* National Staff Development Council.

Cruickshank, M. (2003). Total Quality Management in the higher education sector: A literature review from an international and Australian perspective. *Total Quality Management & Business Excellence, 14*(10), 1159-1167.

Day, C. (1999). *Developing Teachers: The Challenge of Lifelong Learning.* London: Falmer Press.

Elmore, R. F. (2002). *Bridging the Gap Between Standards and Achievement.* Washington, D.C.: Albert Shanker Institute.

Fullan, M. (1993). Why teachers must become change agents. *The Professional Teacher, 50*(6), 12-17.

Fullan, M. (2006). *Change theory. A force for school improvement.* Centre for Strategic Education.

Guskey, T. (2002). Does it make a difference? Evaluation of professional development. *Educational Leadership, 59*(6), 45-51.

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching, 8*(3), 381-391.

Guskey, T. R. (2003). How classroom assessments improve learning. *Educational Leadership, 60*(5), 6-11.

Kvale, S. (1996). *Interviews. An Introduction to Qualitative Research Interviewing.* Thousand Oaks, CA: SAGE.

Little, J. W. (1993). Teachers' Professional Development in a Climate of Educational Reform. *Educational Evaluation and Policy Analysis, 15*(2), 129-151.

Livingston, K. (2012). Quality in teachers' professional career-long development. In J. Harford, B. Hudson, & H. Niemi, *Quality Assurance and Teacher Education* (pp. 35-51). Peter Lang.

Ramsden, P. (2003). *Learning to teach in higher education (2nd ed.).* London: Routledge.

Solbrekke, T. D., & Surgue, C. (2011). Learning from conceptions of professional responsibility and graduates' experiences in becoming novice practitioners. In *Learning Trajectories, Innovation and Identity for Professional Development.* Springer.

Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research, 79*(2), 702-739.

The Impact of Dual Higher Education on the Development of Non-Cognitive Skills

Monika POGATSNIK

Abstract

The dual students, besides their higher education studies, participate in practical training sessions at qualified dual training places. School- and work-based education offer different social environments and different social experiences for the students. Being involved in specific "operational" practical tasks and project-oriented work enhances independent work, learning soft skills, and experiencing the culture of work. In this study, the impact of work-based learning is reviewed on the development of non-cognitive skills in technical higher education. We collected the students' perceptions of their personal and social skills (time keeping, attendance, get on with workmates, communication, understanding other people's point of view, working with others, keeping feelings under control etc.).

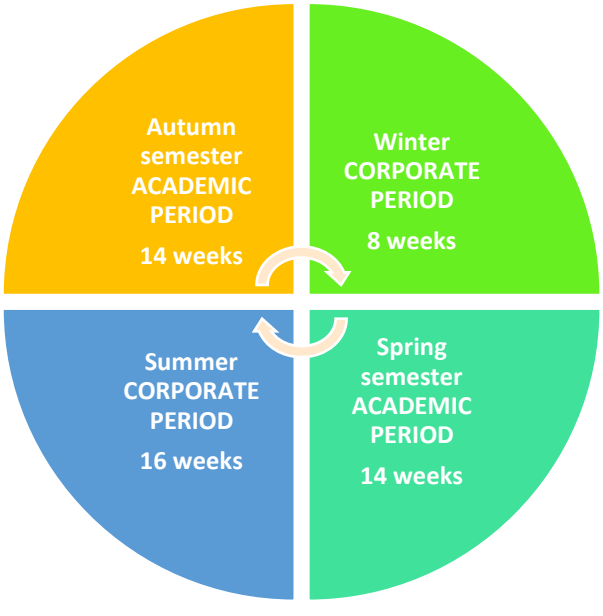
1. The Hungarian Dual Education Model

The dual form of training in higher education launched in 2014 in Hungary. The dual students, just like the regular full-time students fulfil academic assignments during the study or academic period for 14 weeks per semester. After this period, they participate in the practical training, lasting for 8 weeks in winter and 16 weeks in summer after each academic term at an enterprise (including 4 weeks of leave annually), which has a cooperation contract with the university (Fig. 1.). During the corporate period, the dual students gain specific professional knowledge and practical working practice at the enterprise as trainees according to their contract. Being involved in specific "operational"

practical tasks and project-oriented work enhances independent work, learning soft skills, and experiencing the culture of work.

Domestic and international experience highlights the effectiveness of dual training (Melin, 2016; Kovács, Török, 2016; Yu, 2012). Dual training increases professional competences and allows dual students to use the theory learned during the academic period. The knowledge base is obtained in the company environment, by integrating the established curriculum content, structure, a sufficient internship period, and the practical experience gathered from professionally qualified companies (Simonics, 2015). It allows students to convert their theoretical knowledge into practice and enter the labour market as strong contenders eliminating the years of extra training and additional financial expenses.

Figure 1. The Hungarian dual study model



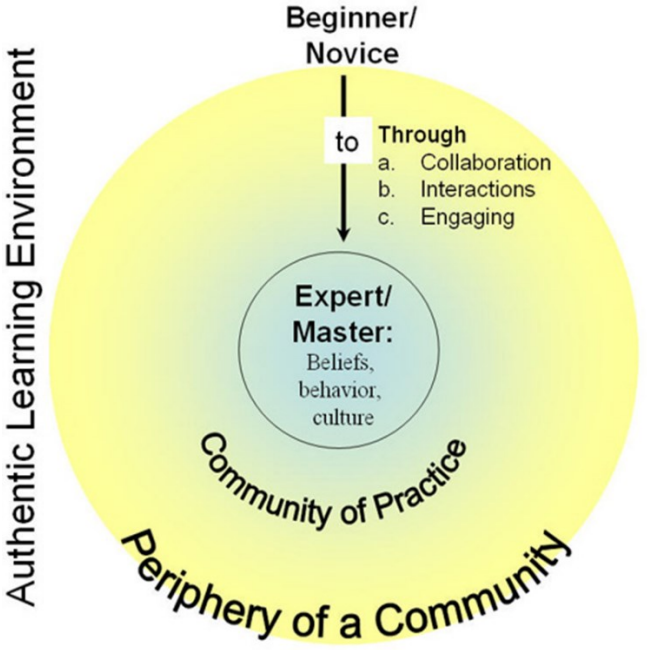
It is often criticized that the university engineer education, far from the real world of work, is not able to train professionals who fully meet the industry's expectations. In the

world of permanent changes today, due to the continually changing economic and social environment (Molnár, 2016), industry practitioners require professionals with experience-oriented training.

Due to its structure, the current two-stage training in Hungary does not offer ample opportunities for practical training. For example, a traditional BSc Engineering student has altogether 6 weeks of practical training spent in the industry. Compared to this, during the 7 semesters, a dual student has 80 weeks of practical training spent in the industry.

The number of university professors and teachers with industrial skills is low in higher education. Universities also face difficulties to pass the so-called "soft skills", in addition to well-established professional knowledge (Battersea, 2014).

Figure 2. Situated Learning



Source: Lave, Wenger, 1991

Knowledge can be acquired by becoming a legitimate peripheral participant in a community of practice, gradually gaining knowledge and reputation through the process of social interaction. Learning is basically about becoming an accepted member of the community (Lave, Wenger (1991).

The informal knowledge gained at a company in dual training contributes to outstanding professional performance. Such knowledge cannot be learned directly; the new students require mastery and guidance within the culture of that specialization. In this cognition process, learners receive continuous, directional support, which promotes extensive participation in higher level processes. The managed support, along with the development of the student, should gradually decrease to the level, when no support is needed (Wood and Ross, 1976). Beginners' knowledge and abilities are limited, and therefore, they need a lot of support and guidance at the start of the learning process. An essential aspect of the process of becoming an expert is to keep in touch with more experienced colleagues and participate in the expanding, challenging joint activity. The direct management of newcomers should follow indirect management, ensuring greater independence, engaging in autonomous problem solving, and enhancing co-operation with partners. In this process, students help the work of mentoring and supportive professional leaders without real responsibility. (Hakkarainen et al., 2004)

School- and work-based education offer different social environments and different social experiences for the students. The dual students get feedback beside their educators and peers from their mentors, co-workers, and clients. The apprentices face an older and more experienced social group. Work-based students interact with real clients, handle valuable equipment and products. They are as well role models for younger apprentices and earn their own money. This situation speeds up the process transitioning to an adult working person role.

2. The need for non-cognitive skills in the 21st-century labour market

The 21st-century competencies have become a focus of interest for educators, employers, and policymakers. While most education systems arm graduates with the cognitive skills needed to enter the workplace, non-cognitive factors such as critical thinking, communication skills, collaboration, creativity allow them to become an adaptive and responsive workforce. Young adults come from mainly theory-based qualifications and are expected to navigate in a world of ever-changing work without having all relevant personal success competencies. They need to be flexible, take the initiative, lead when necessary, they must be able to communicate clearly in different media, collaborate in diverse teams, make sense of a surge of available information, master progressive technologies and find creative solutions to real world-problems.

Today's labor market is characterized not only by the continuous transformation of the professional structure but also by the changes in the content of occupations (Fazekas, 2018). The proportion and importance of tasks requiring non-cognitive skills have increased significantly. The tasks requiring social skills and successful cooperation with others is continually increasing as well. Adaptation to the ongoing labour market changes is also essential, as non-cognitive skills play a significant role.

Research results support (Heckman, Kautz, 2012; Hoeschler et al., 2018) that non-cognitive skills may change with age and can be developed attributes. Young Swiss students were studied between the ages of 15 and 22, in longitudinal research. According to their results, work-based learning plays an important role in the development of non-cognitive skills. Diversified learning experiences, participation in a real business environment, interaction with colleagues and clients are all elements of development.

Non-cognitive skills need to be developed from an early age, which skills play a significant role in school success as well (Khine, Areepattamannil, 2016). Non-cognitive skills developed in early childhood work more efficiently (Kautz et al., 2014) because they lead to better learning habits and stronger school commitment, which positive learning experiences lead to further development of non-cognitive skills. At the same time, for example, in the case of adolescents from disadvantaged families, non-cognitive skills can be enhanced by the combined use of skills training and mentoring (Kautz et al, 2014).

Goldberg's (1992) Five Factor Model is a widely studied and accepted theory that can also be used to group non-cognitive skills (Roberts et al. 2015) (Table 1).

1. Table Terms describing critical noncognitive skills realigned by the Big Five factors

Conscientiousness	**Agreeableness**	**Emotional Stability**	**Openness**	**Extraversion**
Dependability	Collaboration	Confidence	Creativity	Assertiveness
Grit	Collegiality	Coping with Stress	Curiosity	Cheerfulness
Organization	Generosity	Moderation	Global Awareness	Communication
Persistence	Honesty	Resilience	Growth Mindset	Friendliness
Planning	Integrity	Self-Consciousness	Imagination	Leadership
Punctuality	Kindness	Self-Esteem	Innovation	Liveliness
Responsibility	Trustworthiness	Self-Regulation	Tolerance	Sociability

Source: Roberts et al. (2015)

Until recently, the personality was thought to be “set in stone”. Roberts et al. (2006) examined the average change of personality during a lifetime. It was found that individuals became more socially dominant, conscientious, agreeable, and emotionally stable throughout their lives, especially in adolescence and early adulthood.

This research, which shows that personality can change, has two significant consequences. Earlier social and emotional learning seemed to be only relevant to early childhood and primary school education, now there is evidence that it is not only likely but also credible through secondary and even post-secondary education. This research suggests that non-cognitive factors should play a more relevant role in education policy and practice. Investing in the development of non-cognitive skills has a very high potential return.

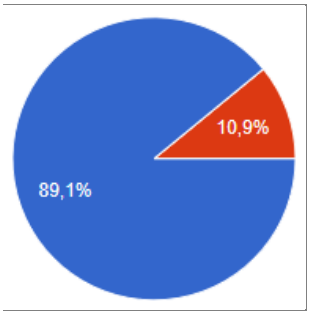
3. The impact of dual education on the development of non-cognitive skills

In our study, we analysed the impact of work-based education (dual education) on the development of non-cognitive skills among the dual BSc students of Obuda University. In our survey, we collected the students’ perceptions of their personal and social skills (timekeeping, attendance, get on with workmates, communication, understanding other people’s point of view, working with others, keeping feelings under control, etc.) (Blades, Fauth, Gibb, 2012). The participants were from different technical and IT BSc courses, they are in different years of their education from the first to the fourth year. Dual students had mainly positive views of their skills, the most commonly improved skills were communication, self-confidence and timekeeping.

3.1. Participants

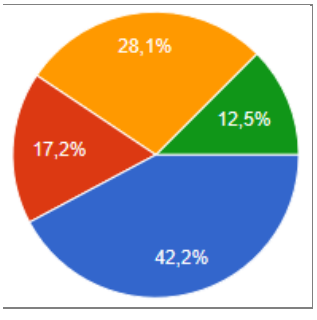
Participants of our survey were dual students of various BSc courses at Obuda University Alba Regia Technical Faculty: mechanical engineering, electrical engineering, land surveying engineering, technical management, and IT engineers. Students studied in different semesters, from the first year to last year students. Four years ago, in 2015, the dual education model was launched at Obuda University, so the first dual students are in the fourth year of their university education. The total population is 126 people, representing the 23 percent of all the full-time undergraduate students at the Alba Regia Technical Faculty of Obuda University. In this research participated 51 percent of the total population, the total number of participants is 64.

Figure 3 Distribution of respondents by gender



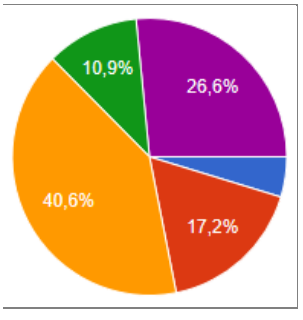
(male 89%, female 11%)

Figure 4 Distribution of respondents by year



(first year 42%, second year 17%, third year 28%, quarterly 13%)

Figure 5 Distribution of respondents by BSc course



(IT Engineering BSc 40%, Electrical Engineering BSc 27%, Mechanical Engineering BSc 17%, Engineering Management BSc 11%, Land Surveying Engineering BSc 5%)

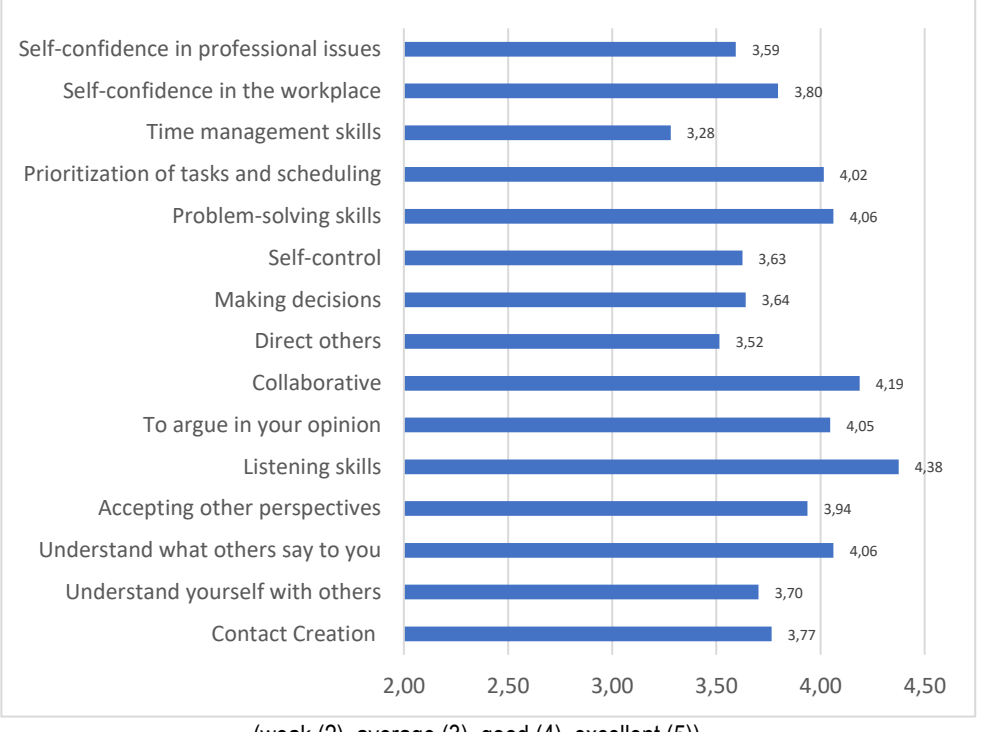
The participants of the research were dual students at 27 different companies. Among the dual partner companies, there are multinational and Hungarian owned businesses of different sizes (big, medium or small companies), all of them operating in Szekesfehervar or its surroundings in the IT or the industry sector.

3.2. Results

Dual students have generally judged their own different skills positively. On the question of how good they are in each area, their average values for each item on the 2-5 scale ranged from 3 to 4.5.

They judged themselves the weakest in timing and in directing others. They considered themselves the best in listening and cooperating with others. (Figure 6)

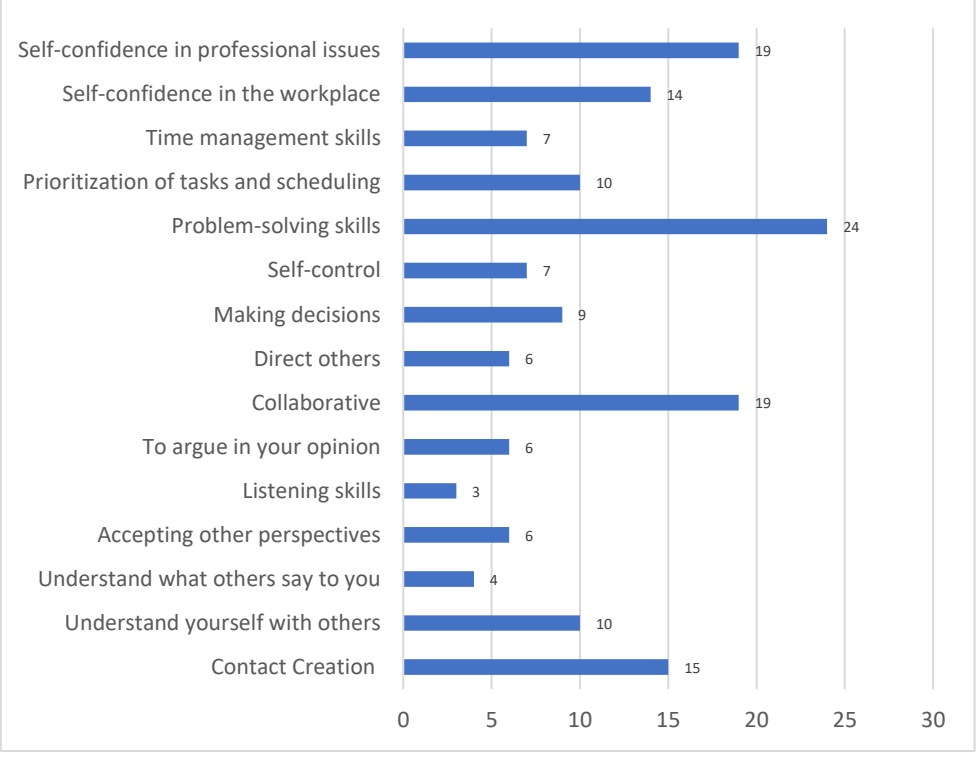
6. Figure The opinion of dual students about themselves



(weak (2), average (3), good (4), excellent (5))

We asked upper-grade students about the skills they developed most during their dual practice. They had to choose the three skills, which evolved the most significantly. The most often the problem-solving skill was chosen. The second was "collaboration" and "self-confidence in professional issues". (Figure 7)

7. Figure In which area did you develop most during dual practice? (frequency of mentioning)



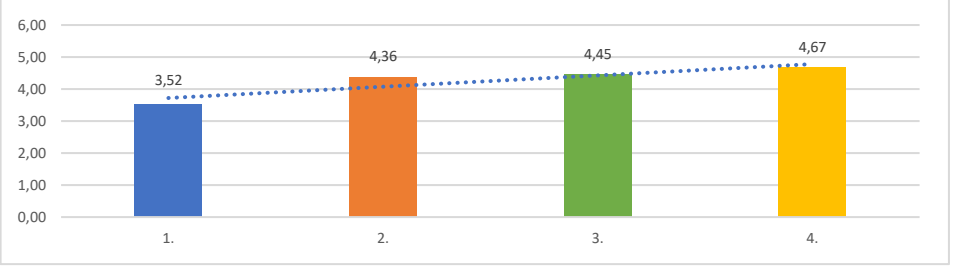
The recent results were compared with previous research (Pogatsnik, 2017) conducted among the dual partner companies, where 33 companies were interviewed about their intentions of their future employees. The skills most often mentioned by managers or HR specialists of the companies are included in Table 2, compared with the skills that dual students think they have developed the most. In both cases, the most often chosen elements were problem-solving skills and collaboration. On the one hand, companies consider this to be the critical soft skill for their future employees, and dual students feel that they have developed most in this area during their dual practice.

2. Table Skills most frequently mentioned by dual partner companies vs. the skills dual students feel having developed the most during their practical training

Dual companies	Dual students
Problem-solving skills	Problem-solving skills
Independent, precise work	Cooperation
Collaboration, Teamwork	Self-confidence in professional issues
Commitment to Ethical Behavior	Contact creation
Reliability	Self-confidence in the workplace

We examined the average values of problem-solving skills among the dual students of each year (Figure 8). The most significant difference was between the first and second-year students, but a steady increase could be observed. Dual students of upper years have identified this non-cognitive skill with the highest frequency in which they feel they have developed most in dual training.

8. Figure Problem-solving skills (1-4. year dual students)



The answers were the following to the open question: “What business experience do you think helped the most to develop your problem-solving skills?”:

"I have a good mentor from whom I can learn a lot."

"I always get some minor tasks that I am responsible for."

"I participate in a project."

“I thought when I had my first independent task that I couldn't solve. But finally, I succeeded.”

"I was thrown into deep water."

"I learned a lot from the tasks entrusted to me."

4. Conclusion

In today's labor market, the so-called 21st-century skills are highly appreciated. To develop these non-cognitive skills, although there are many discourses, there is still very little time and energy spent in traditional schools in Hungary. Professional alternatives coming from outside the school system can be a solution to the complex development of these abilities. Such an alternative is dual training in technical higher education.

The experience of our research confirms that dual students have developed the most in problem-solving and collaborative practice. A supportive mentor, coping with tasks from the independent real life, the so-called “deep water,” and participation in a common project are all factors that make these skills develop positively.

The research among dual students has raised the need for a more extensive, longitudinal research on a larger scale. We are now developing a toolkit for key competencies that can be used to examine the general non-vocational skills of students studying in engineering and information technology bachelor’s programmes. By extending the measurement to all the Obuda University bachelor programmes, we plan to investigate the first- and third-year students, which will provide an opportunity to examine how key competences develop during university years. For example, whether we can measure any difference among traditional and dual training students? Does the dual student's 80-week work experience provide measurable benefits for a traditional trainee student with only 6-8 weeks of work experience?

References

Battersea Tanácsadó, Szolgáltató Kft. (2014): Kutatás-fejlesztési tevékenység megvalósítása jó gyakorlatként azonosított magyarországi és külföldi duális képzési programok elemzése és a kutatáshoz kapcsolódó fejlesztések kapcsán. Esettanulmányok. A Kecskeméti Főiskola duális képzései. pp. 9-17.

Blades, R, Fauth, B., Gibb, J. (2012): Measuring Employability Skills. A rapid review to inform development of tools for project evaluation. London, National Children’s Bureau, p. 39.

Fazekas Károly (2018): Nem-kognitív készségek hiánya a munkaerőpiacon. Magyar Tudomány, 179/1. pp. 24-35.

Hakkarainen, K. P. J. - Palonen, T. - Paavola, S. - Lehtinen, E. (2004): Communities of networked expertise: Professional and educational perspectives. Elsevier Science

Heckman, J.J., Kautz, T. (2012): Hard evidence on soft skills. Labour Economics, 19/12, pp. 451-464.
Hoeschler, P., Balestra, S., Backes-Gellner, U. (2018): The development of non-cognitive skills in adolescence. Economics Letters, 163. pp. 40–45.
Kautz, T., Heckman, J. J., Diris, R., ter Weel, B., & Borghans, L. (2014). Fostering and measuring skills: Improving cognitive and non-cognitive skills to promote lifetime success. Cambridge, MA: National Bureau of Economic Research. p. 86.
Khine, M.S., Areepattamannil, S. (2016): Non-cognitive Skills and Factors in Educational Attainment. Rotterdam, Sense Publishers, p. 443.
Kovacs, Zs., Török, E. (2016): Dual System for Renewing Hungarian Higher Education. International Journal of Education and Learning Systems, vol. 1, pp. 81-85.
Lave, J. – Wenger, E. (1991): Situated Learning: Legitimate Peripheral Participation. Cambridge University Press, New York
Melin, G. et al. (2016): Towards a future proof system for higher education and research in Finland. Publications of the Ministry of Education and Culture, Finland, 2015. http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/75119/okm11.pdf (retrieved: 2019.01.11.)
Molnár Gy. (2016): A szakmai tanárképzés kihívásai az átalakuló, megújuló oktatási rendszerben. In: Buda A. – Kiss E. (szerk.): Interdiszciplináris pedagógia és az oktatási rendszer újraformálása: A IX. Kiss Árpád Emlékkonferencia előadásainak szerkesztett változata. Kiss Árpád Archívum Könyvtára - DE Neveléstudományok Intézete, Debrecen, pp. 328-340.
Pogatsnik, M. (2017): The benefits of the Dual training for students, for companies and for universities In: Conference on University Business Cooperation in Central and Eastern Europe (CUBCCE 2017). Konferencia helye, ideje: Budapest, Magyarország, 2017.12.04-2017.12.05.
Roberts, B. W., Walton, K. & Viechtbauer, W. (2006): Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. Psychological Bulletin, 132, pp. 1-25.
Roberts, R.D., Martin, J.E., Olaru, G. (2015): A Rosetta Stone for Noncognitive Skills. Understanding, Assessing, and Enhancing Noncognitive Skills in Primary and Secondary Education. New York, Asia Society. p. 25.
Simonics, I (2015): Seminar organization, planning and management. In: P. Tóth, P. (edit.): Theoretical foundations of corporate mentor training. Obuda University, Budapest, pp. 53-73.
Wood, D., J., B. - Ross, G. (1976): The role of tutoring in problem solving. Journal of Child Psychology and Psychiatry, (17) 2. 89-100.
Yu, L. (2012): Research on the Cooperative Education Model Cultivating in Higher Vocational Education. Education and Management Engineering, vol. 1, pp. 35-41.

Successful students with disabilities and learning difficulties in higher education in Hungary

Anett HRABÉCZY

Abstract

The focus of our research is on students with disabilities by the current Higher Education Act in Hungary. The actuality of the topic is that after the millennium due to the expansion of higher education, the students mentioned above appeared at universities, but at the law dealing with their presence in Hungary only since 2007. Earlier researches have studied the accessibility and inclusive practices of the institutions internationally and in Hungary, but only a little attention has been paid to these students' chances of acquisition and retention to higher education. Equal opportunities in higher education appear to be an essential supporting factor in our research; however, the exact social context of the individual has a great influence on successful entry and graduation. As a further research opportunity, a more in-depth, more extensive quantitative study of the institutional presence of students with disabilities and the factors contributing to their learning success is emerging.

1. Introduction

Due to the expansion in higher education in Hungary, student groups, called non-traditional students, have appeared at universities (Fenyves et al., 2017; Attewell et al., 2007; Harper, Quaye, 2009; Pusztai, 2011). This includes first-generation graduates from low-status families, women, parents of little children, members of ethnic groups and religious groups, those who starting higher education at an older age and students, who are studying and working at the same time, but Pusztai and Szabó (2014) also lists non-traditional students

with disabilities or special educational needs. All of these student groups have higher risk of dropping out of higher education, so higher education is not able to perform its task effectively to balance social inequalities because of the drop out (Fenyves et al., 2017). However, a higher education system is inclusive only if it is accessible to all levels of society, not just the elite's privilege (Kiss, 2016). However, if non-traditional students are able to reach segments in the labour market that have been excluded before then, inequalities in society can be reduced, and social mobility can increase. (Kiss, 2016).

The appearance of students with disabilities and learning difficulties in higher education can be dated in 2002-2003 in Hungary. (Laki, 2015). Based on the 2011 census data of the Hungarian Central Statistical Office (KSH), which is the latest data at the moment, it can be seen that in terms of the population as a whole, the number of people with disabilities shows a decreasing trend, however, despite the headcount reduction, their number is continually increasing in higher education. Although more and more people with disabilities are attending university, there are still very few people with disabilities in higher education, and only 9% of the total disabled population has a diploma in 2011 in Hungary (KSH, 2015). However, in Hungary, we only have a census every ten years, and we do not have more recent data on the population.

There are few types of research and works of literature on students with disabilities in Hungary (Bánfalvy, 2014), however, it can be seen from these few data that the proportion of people who get a degree in the disabled population is lower than the average population. In one of its publications on the 2011 census, the KSH mentions that its proportion varies by disability type but is generally observable. Education is one of the main contributors to the social integration of people with disabilities and thus to the chances of the labour market (Kálmán, Könczei, 2002). It is a problem in Hungary that their entry into primary schools may also be difficult, and it is also a major difficulty to pursue further education from segregated education and because they are less likely to enter higher education, this makes it harder for them to find job opportunities too (Kálmán, Könczei, 2002). In addition to the low level of education, the Hungarian literature considers social difficulties, social prejudices and obstruction from certain professions as an additional difficult factor that comes from segregation (Kálmán, Könczei, 2002). However, there has been a slight improvement in recent years in terms of qualifications and the labour market. Disabled people have significantly increased their highest completed education, and the number of graduates is increasing (Laki, 2017). However, in 2001, only 5.2% of the population with a disability got a degree, and in 2011 this rate is still below 10% in Hungary. In addition to the highest level of education completed, there is also an improvement in the chances of people with disabilities in the labour market. According to the results of the 2016 KSH micro-census, the number of people with disabilities who have a job increased by 3% between 2011 and 2016 in Hungary (KSH, 2018). This proportion would be significantly improved by facilitating access to a degree for people with disabilities. That is

why it is necessary to make higher education more accessible to them, as the chances of increasing their position in the labour market can increase significantly as the level of education increases (Laki, 2017).

2. Description of the research

2.1. Research Goals

The qualitative stage of the research aims to reveal the supportive forces that can help students with disabilities and learning difficulties during their studies, and to discover how the absolute power of these supporting forces is reflected in the success in their studies.

Based on the review of the literature and Hungarian law, the following hypotheses and research questions were set up:

Hypotheses:

- It is assumed that the existence of institutionalized helping services alone is not enough to complete higher education
- It is assumed that the supporting factors already determine the progress of studies at an early age

Research questions:

- What are the most frequently asked helping services in higher education, and how do these affect study success?
- Do equal opportunities in higher education have an impact on the career choices of students with disabilities?

2.2. Sample and methods

In the qualitative phase of the research, we conducted a semi-structured interview with people with disabilities who have studied full-time or are still studying in a Hungarian higher education institution. Ten people with disabilities participated in our study, including 3 people with graduate degrees, 3 people currently studying, and 4 former students, so they dropped out of higher education. This division is justified by the fact that, through the experiences of graduates and dropouts, the components of supporting and hindering factors can be explored, and current student reports show that the components of equal opportunities in today's practice are more sharply observed.

According to the type of disability, the distribution of subjects is as follows. People with sensory disabilities include 1 person with visual impairment, 2 people with hearing impairments, with learning difficulties 1 person with dyscalculia, and 5 people with dyslexia, and 1 person with autism spectrum disorder participated in the study.

As a limit of the research, we should mention the difficult accessibility of the subjects and their small number in higher education. Depending on this, the purpose of our study is to reveal the difficulties of the students with disabilities, the circumstances of their studies through interviews, which may later be based on a broader questionnaire survey.

3. Results of the qualitative phase of the research

Interviewees are people with special educational needs who have studied in a wide range of disciplines. They are approximately the same age group, aged 22-27.

Most of the respondents studied in an integrated institution throughout their studies. Two interviewees were temporarily involved in special institutional education at primary school, one of them (our visually impaired respondent) during the whole primary school, and one of our respondents (with autism spectrum disorder) studied in a specialized institution when he was in his 5-7th class in primary school.

In the course of our research, we try to reveal the supporting and retaining forces that can be associated with the respondents' learning success and commitment.

During the analysis, we distinguished prosperous and less successful study paths. In order to identify success, we summarized the extent to which individual interviewees are committed to their studies. If they have already left higher education, have they completed their degree or not, and after completing their studies, have they developed their life and plans for the future.

Thus, we considered the study paths of those respondents who were committed to their current studies, or who had completed higher education and then found their place on the labour market. Less successful students were those who were not committed to their studies, dropped out of higher education without graduation, and they did not settle their situation, and those who had significant difficulties in graduation, and these obstacles still exist today.

In our research, we try to find out the factors and effects that can be used to identify what helps students with disabilities to achieve successful graduation and employment. During the analysis, the following factors emerged, which can be used to characterize the subjects: family, especially the influence of parents, the influence of teachers, the attitude

of the other students, the conditions of applying for higher education, academic success, and the services required during the studies.

3.1. Family

In the case of the successful respondents, for the parents of each of them learning is essential and devoting their time to helping their children as well. This was manifested in both shared learning and the financing of extracurricular lessons, especially for those who had already discovered disability and special educational needs in the early years.

In which case, there was no parental support; there was another family member, such as a grandparent's prominent attention and support.

In each case, the parents tried to adapt their expectations to their children's skills, but these expectations were not too low. The lack of parental support appeared in only one of the subjects who were successful that their parents did not recognize dyslexia as a real problem. However, for this subject, institutional support has been prominently displayed, practically compensating for the negative parental attitude.

Subjects with less successful study pathways have all reported that their parents considered learning outcomes important, but they did not provide adequate support. These respondents assume that their parents' schedule and the lack of information about the available options are may be the reason for the lack of adequate support.

An example of this is the report of one of our interviewees:

> "They helped my studies to a full extent from a financial point of view, but since they both worked in a three-shift work schedule, I don't think they could devote as much attention to my studies as they would have liked to." (27 / M / Dyslexia)

Thus, the family environment and the influence of parents can be said to be of particular importance in helping their students with disabilities, especially during the years spent in public education. In addition to the appropriate support, the recognition and acceptance of existing difficulties and the adaptation to the level of expectations and support have proved to be important.

3.2. Teachers

If we look at the role of teachers in support, we can see that when a student was not found to be disabled at birth, the teacher played an important role in finding out about disability. The subjects report that they are due to a teacher to discover their special educational needs.

Also, the supportive activities of teachers are also manifested in helping, encouraging, motivating, and emphasizing the importance of further education during their studies.

The majority of successful respondents reported that teachers supported them by their abilities and were aware of whether they were able to follow the course of the lesson. One of our hearing-impaired subjects reported that her teachers have also recognized other achievements of her, they have tried to get the most out of her skills, such as being praised for her sports results at the end of high school. Another hearing-impaired respondent reported that there were teachers who had explicitly trained on how to educate children with special needs because of her.

Our less successful respondents went to schools where there was no further education at a higher prestigious school, and further education from high school to higher education, so teachers did not pay enough attention to the question of further education in the case of our interviewees.

However, in the case of successful and less successful students, it can be said that the experiences of public education in many cases did not correspond to how teachers treated the students in higher education. Based on the answers, teachers were less attentive to the students in higher education, and they were not interested in whether everyone could follow the course of the lesson. However, due to the small sample, we did not get a comprehensive picture of how the instructors' attitudes appear in different areas of training so that the difference between the disciplines in this respect cannot be examined based on these results.

> “In the high school, they pay more attention to students. There are completely different circumstances at the university, if you have heard something, then you have heard, if not, then look for it. Whether the information is available or not, they are no longer interested in it.” (26 / F / Hearing)

One of the dyslexic respondent’s case is the following. In high school, teachers put a strong emphasis on helping students with learning disabilities. The newly enrolled students completed a learning disorder test, and depending on their results, teachers offered the

students the opportunity to attend a weekly development lesson, and continuously monitored their development and supported their studies. In contrast, in higher education, after telling his problem to his teacher, the teacher surprised and told the student to learn more diligently and did not take the subject's learning disorder into account during the exams.

Thus, in the case of teachers, their work is of paramount importance in both public education and higher education. In public education, teachers have an important role in recognizing the specific educational needs of a child and how they relate to, support, motivate the pupil to move forward and provide them with opportunities for development within the school framework. In higher education, teachers' attitudes towards students with disabilities are also strongly emphasized, with the adoption of difficulties and the attitudes attached to them being of paramount importance.

3.3. Other students' attitudes

In the case of successful respondents, the following trend can be seen when examining different areas of education. Leaving the kindergarten in the primary school reports negative experiences - with one or two exceptions - but the environment has become more and more accepting of the higher steps of the educational system. The fewest problems were found in higher education, which was described as welcoming and friendly.

It can be said that successful students were able to fit into other students more easily, finding their friends easier despite the initial difficulties.

A high school community, based on the report of a dyslexic male subject, stands out where it was natural for students at school to have difficulties. This can be assumed to have a significant role in how the school managing learning disorder (taking the above-mentioned test and a developing lesson).

In contrast to our successful respondents, less successful subjects reported having difficulty to integrating on each educational scene, and even if they were still accepted by other students in primary school, the situation in the secondary school deteriorated dramatically.

The case of a subject with autism spectrum disorder is particularly shocking. In primary school, he had to go to the periphery early on; he felt terrified. Then he moved to a specialized institution but did not experience any improvement in this institution.

> "It turned out that being with kids with disabilities is the exact same as being with the average kids." (27 / M / Autism Spectrum Disorder).

Later he went to college because of the distance between his home and the institution, but some atrocities caused him serious psychological symptoms. However, there is an upward trend in his career, since he reports on his time spent in training and years of higher education, with much less conflict. He still felt a deficiency of not knowing what to do to make friends, but he already sees school and workplace as right a place to make friends.

Thus, the attitude of other students greatly determines its retaining power, which has a particular impact on the motivation and effectiveness of students with disabilities.

3.4. Attending higher education

In terms of prior knowledge of higher education, there was no difference between subjects who were prosperous or less successful, and each reported that they had little information on higher education.

However, the results are different in the circumstances of the application. Successful students, with one exception, were all motivated by further education from their early school years. Only one of them did not want to go to higher education, but he was encouraged by his teachers.

All of our successful interviewees applied to higher education without interrupting their study time, so after graduation, they immediately entered higher education. For most of them, there was a more extended period of reflection than two respondents, the visually impaired interviewee, who imagined her future in the field of special education and one of our dyslexic male interviewees, who continued to choose the musical career as the same of his earlier music studies. All of them took into account their abilities and interest in selecting the appropriate degree program.

In the case of less successful respondents, the choice of institutions was less conscious. It was a great challenge for our respondent with dyscalculia to choose from. He did not find any training that was appropriate to his interests, and our other respondent (dyslexic) did not choose according to his interests.

The case of our subject with autism spectrum disorder is somewhat different from the others because in his case, the parental control was stronger in terms of choice.

Thus, in the case of applications for higher education, the appropriate awareness of the choice of profession is highlighted based on reports, especially about the ability and interest. However, the communication of higher education institutions to students with disabilities did not prove to be an influencing factor. Based on what they said, the subjects

did not get information about equal opportunities in higher education and about the university life itself.

3.5. Success in studies

We can say about our successful respondents that they describe themselves as basically medium and good learners, remembering public education. At first, they mentioned themselves as a good learner and formulated that good results were among their parents' expectations. However, in higher education, they are already reporting a deterioration in their average, and they thought it was more important to complete the subjects than the right results.

In public education, there were competitions; for example, one of our hearing-impaired respondents were successful in sports competitions.

The case of one of our dyslexic respondents shows an interesting picture because, after two years of development in primary school his teachers told that he had “outgrown” his dyslexia, he did not need further development. However, his results did not show any improvement, and at the beginning of high school, he was confronted with the fact that his learning disabilities still exist. He reported on the results of the development lesson in high school that he did not contribute to the development of his abilities and achievements, but to change his way of thinking, his attitude to the subject learned and his abilities, which in turn was a great development.

We can report similar results for subjects with less successful studies. In their case, however, the deterioration of learning outcomes occurred sooner.

Our case of the respondent with dyscalculia is very noticeable because the problem was discovered very late. In the lower section of primary school, he describes himself as excellent, mentions only mathematics as difficulty, but then his results gradually deteriorated, while at the end of high school he had to repeat a year because of his results of mathematics. Thus, teachers only suggested to him in the last year of high school to see himself with an expert.

3.6. Helping services during school years

All in all, in the case of each of our subjects, it can be said that teachers in public education typically provided more help to use the opportunities. They suggested the different options

for the students, but we must add that the teachers in the public education typically knew about the difficulties of the students. However, when entering higher education, students were only divided in very few cases by their teachers.

Our respondents who have completed their studies are characterized by the fact that they are most often asked to replace the oral/written exam and to apply for a complete or complete exemption from the language exam. However, those who take advantage of this have typically benefited from similar relief in public education. One of our hearing-impaired respondents was allowed to replace a difficult subject with a freely chosen subject in order to obtain a degree.

For a dyslexic male respondent, there is a longer process of taking advantage of the opportunities. Gradually, he used various discounts during his studies. In high school, he was initially exempted from literary and written assignments, and later he received relief from mathematics, and finally, he was exempt from a foreign language, so he was also exempt from passing the final examination. Although he took advantage of the language exam in higher education, he felt that it was no longer necessary for his instructors to know about his problem, so he only applied for an exemption from the language exam in order to obtain a diploma. Otherwise, he did not apply for help.

Respondents with less successful studies did not have sufficient information on the services available in higher education. Though the problem of our respondent with dyslexia came up late, they turned to an expert at the suggestion of their teachers, and thus got an exemption from mathematics.

A student with autism spectrum disorder got a student who would have been in charge of his administration, but our subject did not take advantage of these opportunities, instead he sought help when he got lost in the building. From this case, we can conclude that the information on the filter of similar students is different, so they should be given more targeted help in response to the student's request for help.

In the case of access to services, therefore, it is of crucial importance that the institution has sufficient information on students with disabilities, which is not only an important factor in public education but also in years of higher education. It has been shown that the different characteristics of different disabilities should be taken into account and adapted to their needs.

4. Summary

Our research aimed to identify the supporting factors that help students with disabilities and learning difficulties to achieve a successful study path and graduation.

Analyzing qualitative data, we have identified those supportive forces that have an impact on students' learning paths. These factors include the impact of the family, teachers and other students, and the conditions for applying for higher education.

For our hypotheses, we received the following results:

Our first hypothesis can be confirmed by the fact that the existence of institutionalized services and the opportunities it offers are not sufficient in themselves to enable the pupils concerned to complete their studies, although they make a significant contribution to a successful career.

Our second hypothesis has also been confirmed by the interview study, according to which the supporting factors have a decisive influence already in the early stages of life, at the beginning of the school career.

So, we got the following answers to our research questions:

The most frequently used services are the partial or total exemption of language examinations, or the easing of the language examinations and the substitutability of the written and oral examinations according to the student's abilities about the customization of the exams.

Equal opportunities and services available in higher education do not determine career choice, because according to the answers the students had very little information about higher education at the time of admission, and among the little information available there were no discounts available in higher education.

To sum up, it can be said that there are very sharp differences between students who have completed a successful and less successful study path, especially concerning the supporting background. The presence of supporting forces can compensate for the disadvantages arising from the capabilities, and in the case of students with disabilities, these factors are especially needed.

The generalization of research results is constrained by the difficult accessibility of the target group and the incomplete coverage of databases because not all stakeholders register as disabled students.

Our results also suggest the possibility of further research.

The topic can be examined not only for students with disabilities and learning difficulties but also for the majority students and for coordinators working in higher education and equal opportunities workers. These results can make the results obtained by disabled students more sophisticated.

It is advisable to examine the methods and opinions of employees of higher education organizations assisting students with disabilities about the effectiveness of their work for equal opportunities, as well as which types of disabilities are the cases, grades, circumstances when the requested discount can be awarded to students, in which cases they require the most help.

In the case of majority students, the aim of the research can be to examine how and in what quality information is provided to enable students with disabilities to be created, and to what extent they accept disabilities and their views on how they can help equal opportunities for the students concerned. Does the extent and quality of their information affect the effectiveness of creating job opportunities for students with disabilities?

References

Attewell, P., Lavin, D., Domina, T. and Levey, T. (2007): Passing the torch: Does higher education for the disadvantaged pay off across the generations? Russell Sage Foundation, New York.

Bánfalvy, Cs. (2014): Fogyatékos személyek diplomával, Gyógypedagógiai szemle, 42. 4. sz. 249-267.

Fenyves, V., Bácsné Bába, É., Szabóné Szőke, R., Kocsis, I., Juhász, Cs., Máté, E. and Pusztai, G. (2017): Kísérlet a lemorzsolódás mértékének és okainak megragadására a Debreceni Egyetem Gazdaságtudományi Kar példáján, Neveléstudomány: oktatás-kutatás-innováció, 5. 3. sz. 5-14.

Harper, S. R. and Quaye, S. J. (2009): Student Engagement in Higher Education. Routledge, New York-London.

Janák, K. and Tokaji, K. (2018): Mikrocenzus 2016. 8. A fogyatékos és az egészségi ok miatt korlátozott népesség jellemzői. Központi Statisztikai Hivatal, Budapest.

Kálmán, Zs. and Könczei, Gy. (2002): A Taigetosztól az esélyegyenlőségig, Osiris Kiadó, Budapest

Kiss, L. (2016): Hátrányos helyzetű csoportok a felsőoktatásban – A csoportok azonosítása, a kutatási fókusz meghatározása In: Fehérvári Anikó, Misley Helga, Széll Krisztián, Szemerszki Marianna és Veroszta Zsuzsanna (szerk.): A

felsőoktatás szociális dimenziója, Hátrányos helyzetű csoportok hozzáférése és részvétele a felsőoktatásban című kutatás, Tempus Közalapítvány, Budapest

Laki, I. (2015): A felsőoktatás hallgatói – a fogyatékossággal élő hallgatók felsőfokú tanulmányai. In Karlovitz J. (szerk.): Fejlődő jogrendszer és gazdasági környezet a változó társadalomban, International Research Institute, Komárno

Laki, I. (2017): A magyarországi nagyothallók társadalma
In: Torgyik Judit (szerk.) Válogatott tanulmányok a társadalomtudományok köréből. Konferencia helye, ideje: Párkány, Szlovákia, 2017.06.12-2017.06.13. International Research Institute, Komárno

Pusztai, G. (2011): A láthatatlan kezektől a baráti kezekig. Új mandátum kiadó, Budapest

Pusztai, G. and Szabó, D. (2014): Felsőoktatási hallgatók és fogyatékossággal élő társaik. Kapocs, 13. 4. sz. 23-36.

Tausz, K., Bácskay, A., Csordás, G., Kovács, B., Németh, E., Panyik, B. and Tóth, J. N. (2015): 2011. évi népszámlálás 17. a fogyatékossággal élők helyzete és szociális ellátásuk, Központi Statisztikai Hivatal, Budapest

Excellence in the International Higher Education Arena

Internationalization of Széchenyi István University

Eszter LUKÁCS

Abstract

This paper describes the internationalization of Széchenyi István University (SZE) and consists of five sub-sections. After a brief introduction to the history of the University, we present the National Strategies which define the institution's internationalization strategy and future vision as defined in the development plan. The third section deals with the University's compliance with its strategies and vision of the internationalization process. Section four focuses on SZE's internationalization processes from 2016, including the expansion of English-taught programmes, changes in international student totals and the organizational processes and institutional changes related to internationalization. The fifth chapter describes changes induced by international student feedback. In the internationalization process, the management operates "top-down" in relation to its strategies and internal development plan and "bottom-up" to student feedback. In addition to following the good practice of institutions experienced in internationalization, fine-tuning of SZE's internationalization process is based on the above two directions.

1. A brief introduction to Széchenyi István University

Győr has always been a city with significant educational institutions. In addition to both church-run as well as state primary and secondary schools, from the 19th century onwards the city's higher education institutions functioned in accordance with the needs and standards of the age. Established in 1718, the Jesuit Academy offered courses in theology, the humanities and law, and from 1745 the institute was also open to secular students.

Beginning its operation in 1776, The Royal Academy of Győr functioned with greater or lesser intermittent breaks until 1892.

The next date of significance is 1968. This year saw the establishment of the direct legal predecessor of our institution, the Technical College of Transport and Telecommunications. The college trained transportation and telecommunications infrastructural engineers, as they were previously known. At that time, in the picturesque meandering bend of the River Mosoni Danube, a few minutes' walk from the Baroque city centre, there was constructed a complex of buildings purpose-built for use in higher education - a rare exception in Hungary. Since 1986 the institution has borne the name of Széchenyi István, "the greatest Hungarian".

The university has served and will continue to serve the economy and society of the city and the surrounding region with its ever-expanding palette of training opportunities. Besides engineering sciences, from the beginning of the 1990s, programmes in economics, health sciences and social studies also appeared. In 1995, via an outplacement programme from Eötvös Loránd University, legal training and law degrees returned to the city, and starting in 2002, Széchenyi István University launched its own law degree programmes. With the integration in 1995 of the Győr branch of the Liszt Ferenc Academy of Music's Teacher Training College, by the turn of the century there was effectively established a university-like institution which, with the number of students, the academic quality of its teaching staff and the diversity of its training courses, was granted university rank from 1st January 2002 (SZE, 2019).

Main Data:

- 9 Faculties:
    - Deák Ferenc Faculty of Law and Political Sciences
    - Kautz Gyula Faculty of Business and Economics
    - Audi Hungaria Faculty of Automotive Engineering
    - Faculty of Mechanical Engineering, Informatics and Electrical Engineering
    - Faculty of Architecture, Civil Engineering and Transport Sciences
    - Faculty of Health and Sport Sciences
    - Faculty of Performance Arts
    - Apáczai Csere János Faculty of Humanities, Education and Social Sciences
    - Faculty of Agricultural and Food Sciences
- 4 Doctoral Schools:
    - Doctoral School of Regional Sciences and Business Administration & Management Sciences

  - Multidisciplinary Doctoral School of Engineering Sciences
  - Wittmann Antal Multidisciplinary Doctoral School of Plant-, Animal-, and Food Sciences
  - Doctoral School of Law and Political Sciences
- 76 Hungarian-taught programmes (at present)
- 24 English-taught programmes for 2019 / 2020
- Campus area: 101.724 m²
- 25 sports and cultural facilities
- More than 12,000 students in 2018
- 1,076 members of staff, of which 622 teaching staff
- 63 professors

2. Strategies defining the internationalization process of Széchenyi István University and the Institutional Development Plan (IDP)

The internationalization of Hungarian higher education is carried out in line with the "Shift in Higher Educational" strategy conceptualized in 2014. Points relating to the internationalization process in Széchenyi István University's Institutional Development Plan (IDP) adopted in 2016 and covering the period to 2020, are also based on the above strategy. Taking into account the national economic development trends, our university is continually fine-tuning its development trends, thus aligning them with the recommendations as formulated in the General Economic Development Strategy of the Ministry for Innovation and Technology (MIT 2018-2030) for the whole economy and the development of the higher education system.

Section 2 of the paper follows a chronological order, describing the objectives for internationalization as conceptualized in The Ministry of Human Capacities' 2014 strategy for higher education, Széchenyi István University's 2016 general and internationalization visions and the objectives set out in the MIT's 2018 strategy for internationalization and higher education institutions.

2.1. The strategy "Shift in Higher Education"

Contained in the third section of the strategy "Shift in Higher Education", the objectives of the internationalization of higher education are an analysis of the present and future goals of higher education, the determination of requisite changes as well as the competitive

environment and details of performance-enhancing conditions to guarantee quality and success. The prerequisite for the evolvement of the above-mentioned strategy is profile clarification and specialization, the transformation of the institutional system, educational innovation, as well as effective institutional management and new business models. Sub-point (3.2.), concerning the transformation of the institutional system, which describes the main objective as "the establishment of an efficient and effective institutional system adapted to the country's spatial structure and its positioning in both the Carpathian Basin and in Europe" aims at the unity of Hungarian higher education in the Carpathian Basin, to provide the region's "people of Hungarian ethnicity with access to higher education" and on the other hand, to prioritize the internationalization of Hungarian higher education (MHR 2014, p. 39).

This latter includes three objectives along with the main goal of the Strategy:

- positioning of domestic institutions in international competition;
- increase in the international mobility of students, educators and researchers;
- the strengthening of institutional international relations with strategic partner states (MHR 2014, pp. 51-52).

The Strategy sees the first objective as possible by increasing the resource-raising capacity of higher education institutions, as well as by increasing the number of research teams, and by increasing effective tendering activity. Actions for the second objective include "improving the internationalization of higher education institutions, enhancing international visibility and strengthening the ability to attract international students (both European and non-European), as well as encouraging student and researcher mobility, in particular via the expansion of the Stipendium Hungaricum Scholarship Programme." A prerequisite for the Strategy is the increase in the number of programmes taught in foreign languages. Among the measures, the Strategy emphasizes the expansion of international equivalence contracts to reduce the administrative burden of returning Hungarian students. The third objective is progress in international rankings. The means of its implementation are the strengthening of bilateral and multilateral projects (e.g. Erasmus, Fulbright, Tempus, etc.), the strengthening of professional co-operation and the integration of research technology in institutional tenders (MHR 2014, pp. 51-52).

2.2. Széchenyi István University Institutional Development Plan (IDP) 2016-2020

The mission of Széchenyi István University is to increase the volume of higher education so that, due to its professional and scientific significance and size, as well as to its outstanding role in the economic environment of the region, it will become dominant in the Hungarian and even the Central European higher education area. The aim of the institution

– in line with its role in Hungarian higher education – is by 2020 to become an internationally competitive research centre with a strong R&D service background and significant industrial relations.

The Vision of Széchenyi István University: by 2020, Széchenyi István University, as a regional higher education centre enclosed by the towns of Tata, Tatabánya, Székesfehérvár, Pápa, Zalaegerszeg, Szombathely, Komárom, Dunaszerdahely and Révkomárom will be able to attract talented students from the area;

- capablility to develop its infrastructure in parallel with its growth;
- renewal of its organizational structure: assigning degree courses and training to departments; several research centres working in close cooperation with the departments in the matrix structure: the centres organize research teams by project, crossing department boundaries in line with the principle of multidisciplinarity;
- the institution has a strong basic research base, essential to meet the region's applied long-term research needs;
- the University provides time for academic and project work for both teachers and students (providing a research / project / Scientific Student Association day for both students and teaching staff) and opportunities (modern laboratory infrastructure and equipment park);
- increase in its international visibility via international projects, student and professional exchanges, rising international student enrollment and targeted international partnerships;
- significant increase in the domestic and international importance of Masters and doctoral programmes in the institution's academic training structure;
- due to its role as a catalyst for the Centre for Higher Education and Industrial Cooperation, Győr and its surroundings are an outstanding growth zone (SZE 2016, p. 25).

2.3. General Economic Development Strategy (GEDS) (2018-2030) (MIT)

The October 2018 General Economic Development Strategy developed by the Ministry for Innovation and Technology is currently available in the form of a working document. The principal objective of the Strategy is that by 2030, for quality of life, Hungary will belong to the top five countries in Europe. The above aim can be achieved via strong Hungarian enterprises, a stable workforce and growing wages (MIT 2018, p. 3). For the realization of a stable workforce and growing wages, the Strategy has four main goals: the creation of a flexible labour market policy, the reform of the education system, a work-incentivizing

social system and the reduction of the burden on employment. Within the reform of the education system, the Strategy sets out four more objectives: the raising of teachers' salaries, the centralization of funding for schools, the introduction of dual training and vocational training and the promotion of STEM studies. (MIT 2018, p. 41) The Strategy states that within the European Union in the field of innovation, Hungary is ranked 22nd. The vision of the innovation policy is as follows: Hungary should achieve European-level R&D and innovation potential in key economic areas by 2022. The mission of the Ministry is to focus on domestic R&D and innovation activities by strengthening R&D cooperation to enhance Hungary's competitiveness. HEIs are at the centre of renewing R&D activity. The authors of the Strategy believe that a university-centred innovation ecosystem will create and develop internationally competitive nationally-owned businesses. The Strategy endorses:

- closer cooperation between HEIs and the research institutes of the Hungarian Academy of Sciences (HAS)
- the strengthening of corporate links with higher education
- enabling R&D capacities of research infrastructures and research facilities for local companies to lease
- supporting new types of research infrastructures
- emphasized attention to STEM education
- the strengthening of STEM research areas (theses to solve real business problems, the involvement of industrial business professionals as tutors, enterprise-oriented research, "industrial" PhDs) (MIT 2018, p. 79).

3. Alignment of Széchenyi István University's internationalization process to particular strategies

3.1. Shift in higher education

The process of internationalization at Széchenyi István University is carried out in accordance with the goals of the strategy "Shift in higher education". On the basis of the Strategy, the word *competition* for (foreign) students refers to healthy international competition with other HEIs (Ministry of Human Resources (MHR, 2014)**.** The University prepared for the challenges and international competition during the internationalization process of the previous two academic years (2016/17 and 2017/18), which affected both the adaptation and transformation of the entire institutional administration system to conform with international standards as well as preparation for the delivery of the English-taught courses. The international EFOP and GINOP projects largely supported the latter,

in particular the project entitled "Internationalization: Teacher, Researcher and Student Provisioning, Development of Knowledge and Technological Transfer as Tools of Intelligent Specialization at Széchenyi István University" (Identification Number: EFOP-3.6.1-16-2016-00017), of which the sub-project "Visualization of internationally-oriented research areas in the international arena", provides additional opportunities for colleagues to pursue their scientific dissemination activities in English. Systematic publication activities in English and participation in international conferences have created an excellent foundation for colleagues with international academic experience to teach international students - as well as Hungarian students wishing to study in English - on the English-taught programmes. One of the key elements in the competition to attract international students is a presence on international rankings so that Széchenyi István University's appearance on the 2019 QS Rankings list can be considered among the University's successes. To improve the University's position on the rankings, the following are important:

- the further coordination of publication activities (appearance in Scopus registered journals)
- the involvement of foreign visiting lecturers/researchers via mobility programmes
- the need for further positive influences on the perceptions of both the international scientific community and (foreign and domestic) alumni networks regarding the University

The above points, described coherently in the Strategy, will create the raison d'être for higher expectations from students, which are legitimized by significant improvements in training quality caused by the pressure of competition. Instructors' professional and methodological skills, their educational experience and financial recognition make it possible to develop a classical master-student relationship, thus enabling differentiation of the students' individual abilities. While motivated, harder working students can go at a faster pace in their studies, acquiring foreign and labour market experience, engaging in real, practical projects and genuine basic research tasks, or in dual training, less talented students can be retained within the institutional web by the employment of drop-out reduction programmes (MHR, 2014).

The combined consequence of the above is the rising, mutually reinforcing performance of students, lecturers and the University, leading to a positive and mutual impact of the performance on international reputation and (quality) student numbers and subsequently to a further (quality) growth in the reputation and international student numbers. Pressure for compliance with a good, established international reputation gives rise to the need for continuous improvement in performance.

Success is promoted by the necessary but insufficient conditions of the above-listed processes. Since the global economic crisis in 2008, the sharp collapse in funding has prompted higher education institutions to consider new business models and the creation of their own revenues to supplement subsidies from the maintainer.

3.2. Széchenyi István University Institutional Development Plan (IDP) 2016-2020

The main goal of internationalization in Széchenyi István University's Institutional Development Plan is to increase international visibility through international projects, student and professional exchanges and the increasing enrolment of international students. To achieve this, our University aims to develop the following targeted partnerships and to achieve the following goals:

The area of internationalization is discussed in Section 2.4.3. of the University's Institutional Development Plan (IDP). The Plan is coherent with the Strategy outlined in subchapter 1.1, whereby the following main institutional objectives were set:

- reinforcement of university relations in Europe and the Carpathian Basin
- expansion of bilateral and international projects, professional cooperation (ERASMUS, Fulbright, CEEPUS, TEMPUS, etc.)
- enhancement of international student mobility (recruitment activities) in particular in the selected target regions (East, South East and South Asia and the BRICS countries)
- enhancement of Hungarian student mobility abroad, contributing to the fulfilment of the Leuven Goals
- strengthening of educational and research ties with German and Austrian partner institutions, enhancement of bilateral student mobility
-
- preparation for the period following the H2020 cycle, sharing the resources of Horizon Europe via cooperation with international institutional partners (SZE, 2016).

The Internationalization of academic programmes, research, education and science-disseminating activities in foreign languages (mainly English), supported by EFOP and GINOP projects until 2020, are not primarily for economic or income-generating purposes. In addition to generating financial recognition for the work of colleagues and thus maintaining/developing a well-motivated teacher-research base, the main goal is the continuous improvement in the quality of the educational core activity and compliance with

international competition. It is particularly important to emphasize that well-motivated, internationally recognized, globally qualified trainers have similar relevance to the training of Hungarian students, as the development of student excellence and talent management formulated in the IDP is inconceivable without the successful accomplishment of internationalization (MIT, 2018).

International visibility as expressed in both the IDP and the Higher Education Strategy has already been established; Széchenyi István University is listed on QS Rankings; in the following academic years the aim is to strengthen and improve the position. “Getting onto” the rankings, and permanently appearing there is not a goal in itself, but rather a source of foreign student recruitment, thus indirectly a source of quality improvement, and a feedback system for guiding further developments. Internal analytical materials made available to the evaluation bodies (QS and THE) guide long-term development.

3.3. General Economic Development Strategy (2018-2030) (MIT)

Alongside the main objectives, the Strategy of the Ministry of Innovation and Technology regards the improvement of domestic competitiveness of Hungarian HEIs as one of its main guarantors. By means of its processes of internationalization, Széchenyi István University contributes to the realization of the following strategic objectives:

- The aim is to train students who are immediately able to adapt to the labour market at the time of their graduation, thus necessitating dual training programmes, industrial diploma work and PhD theses, apprenticeship programmes and the involvement of corporate professionals in education and, in general, the strengthening of an entrepreneurial / customer service attitude (MIT, 2018). Széchenyi István University, in addition to being an outstanding intellectual base of the region, is one of the most important employers, the main guarantor for students' compliance with the labour market. The current 1.8% unemployment rate (KSH, 2018) is with reference to the alignment of training programmes to the labour market, allowing graduates to be placed immediately or even during the training process.

The Strategy highlights the emphasis on STEM (science, technology, engineering & maths). The intention of directing young people towards scientific careers is marked by organic collaboration in the close proximity of Széchenyi István University, with the Mobilis Interactive Exhibition Centre, which is closely linked to our Institute and is involved in the recruitment campaign preceding university admission procedures for high school students

and the *Open Doors* event series. The focus is on orienting female students to STEM professions (MIT, 2018). In addition, every academic year Széchenyi István University organizes the so-called "MérNŐK" event that aims to motivate girls in the last year of high school to apply for programmes offered in the three technical-scientific faculties (Audi Hungaria Faculty of Automotive Engineering; Faculty of Mechanical Engineering, Informatics and Electrical Engineering; Faculty of Architecture Civil Engineering and Transport Sciences).

4. English language training programmes at Széchenyi István University, administrative organizational planning and implementation

This section covers a brief history of the internationalization processes actively started at Széchenyi István University in 2016 including the increase in the number of courses taught in English, the changes in the number of international students and the institutional, organizational processes and organizational changes related to internationalization.

Széchenyi István University's process of internationalization was preceded by a fundamental infrastructural renewal, in the framework of which a new University Library, a „New Knowledge Space" building, new laboratories, Halls of Residence and faculty premises were built and/or renovated. The entire Academic and Administration Building underwent energy modernization and renovation. The renewal of the physical infrastructure is not complete, as the Management Campus building, now also home to the Kautz Gyula Faculty of Business and Economics, was only completed in January 2019.

The internationalization process was also preceded by a curriculum reform in the academic year 2016/17, in which, following a review of the curricula and the abolition of parallelisms and redundancies, the University's management freed up research capacities and strove to redirect them for teaching and research carried out in English.

In academic year 2015/2016, the internationalization of the University began with the launch of full-time MSc programmes in Infrastructure - Civil Engineering and Marketing. Following the success of these programmes, in Autumn 2016 a further three English-taught programmes at Bachelors, Masters and Doctoral levels (BA International Relations, MSc Supply Chain Management, PhD in Business Administration and Management Sciences, SzEEDSM) were launched, which via support from the Stipendium Hungaricum programme in academic years 2016/17 and 2017/18 provided the basis of an international student body at Széchenyi István University.

From May 2017, so-called internationalization meetings were held on a weekly basis attended by heads of organizational units directly involved in the transformation process as well as by academics responsible for programmes already operating and programmes

in preparation for launching. Of the former, colleagues were delegated by the Centre of International Programmes (CIP), the Registrar's Department, the Department of Educational Organization, the Financial Directorate, the Legal Department, the University Service Centre, the University Student Council (USC), the Foreign Language Education Centre (FLEC) etc. where the following topics were reviewed weekly:

- Promotion of international programmes, marketing activities
- Admission process (evaluation, selection system)
- Student contracts
- General information
- Halls of Residence, accommodation
- Academic administration
- Health care, health screening, insurance
- Use of *Neptun* system
- Immigration regulations
- Tuition fees, finances
- Mentor system
- Academic tutoring
- Education and examination regulations concerning foreign students

At the end of each meeting, minutes were prepared, and subsequent meetings were often used to check the current stage of implementation of the points previously recorded in the minutes. This follow-up control system was the guarantee of the actual "product outputs": the English translation of the content of the *Neptun* system, the text of the recruitment agent contracts, Széchenyi István University's English language website, the image film, the promotional brochure outlining the English-taught programmes, the design of the student mentoring system and the adaptation and translation of the regulations for international students etc.

Table 1 Number of students and English-taught programmes at Széchenyi István University

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Total number of students	10 668	10 540	10 429	12 743	12 281	12 189	
Total number of full-time students	7 355	7 217	6 953	8 198	7 774	7 616	
Total number of international students*	399	337	336	409	440	475	
Total number of international students* *	33	52	64	58	142	199	
Number of English-taught programmes	0	0	2	5	5	7	24

* with reference to citizenship only ** with reference to nationality and citizenship
Source: compiled by the Author

Within the framework of the Stipendium Hungaricum (SH) programme, The Tempus Public Foundation has announced a new call for applications for the cycle covering academic years 2019/20 - 2021/22, in which Széchenyi István University has received support for 20 training programmes. In the construction, the Government of Hungary assumes the costs of tuition fees for international students as well as paying a monthly stipend and contributing to accommodation costs. In academic year 2018/19, via the previous SH cycle, in addition to the earlier supported five programmes run on a purely market basis with the admission of self-funding students from third world countries, two additional English-taught programmes run by the Audi Hungaria Faculty of Automotive Engineering – a BSc and an MSc degree programme - were also launched. In the same academic year, Széchenyi István University was able to receive 200 students of non-Hungarian nationality and non-Hungarian citizenship originating from 45 countries in the world (19 Asian, 14 European, 9 African and 3 American countries), representing a 40% increase in international student numbers in comparison with figures from the previous academic year.

Table 2 Provenance of international students by region / country

Region	No. countries
Africa	9
Americas	3
Asia	19
Europe	14
Total countries	45

compiled by the Author

In February 2018, Széchenyi István University registered itself for ranking in QS World University Rankings. Then in October 2018, with the publication of the regional listings, it appeared ranked between places 201-250 in the EECA Group. In order to accurately define the medium-term development trends (3-5 years) with reference to internationalization, Széchenyi István University also had its performance evaluated in the QS Stars Rating System, and as a result of which was awarded overall three QS Stars. The University performed particularly well in the two categories *Teaching* and *Facilities*, receiving four stars in both.

From academic year 2019/2020, in addition to the 20 programmes supported by Stipendium Hungaricum, Széchenyi István University is launching Masters programmes in Music, an MSc degree programme in Computer Science Engineering as well as LLM and Expert programmes in Law & Governance. Eight faculties in total are offering the following 24 academic programmes:

Table 3 Academic programmes

Bachelors Programmes (BA/BSc)

Audi Hungaria Faculty of Automotive Engineering

Bachelor in Vehicle Engineering (BSc)
Bachelor in Logistics Engineering (BSc)

Faculty of Architecture, Civil Engineering and Transport Sciences

Bachelor in Civil Engineering (BSc)

Bachelors Programmes (BA/BSc)

Faculty of Agriculture and Food Sciences

Bachelor in Agricultural Engineering (BSc)
Bachelor in Food Engineering (BSc)

Kautz Gyula Faculty of Business and Economics

Bachelor of Business Administration and Management (BSc)

Apáczai Csere János Faculty of Humanities, Education and Social Sciences

Bachelor in International Relations (BA)

Masters Programmes (MA/MSc)

Audi Hungaria Faculty of Automotive Engineering

Master in Vehicle Engineering (MSc)

Faculty of Architecture, Civil Engineering and Transport Sciences

Master in Infrastructure - Civil Engineering (MSc)
Master in Architecture (MSc)

Kautz Gyula Faculty of Business and Economics

Master in Supply Chain Management (MSc)
Master in Marketing (MSc)
Master in International Economics & Business (MSc)

Faculty of Mechanical Engineering, Informatics and Electrical Engineering

Computer Science Engineering (MSc)

Faculty of Performing Arts

Clarinetist Performance (MA)
Flautist Performance (MA)
Pianist Performance (MA)
Trumpet Performance (MA)
Violinist Performance (MA)

Doctoral Programmes (PhD)

Kautz Gyula Faculty of Business and Economics

Business and Management Sciences Doctoral Programme, SzEEDS[M]

Wittmann Antal Multidisciplinary Doctoral School of Plant, Animal and Food Sciences

Doctoral Programme in Plant, Animal and Food Sciences

Multidisciplinary Doctoral School of Engineering Sciences

Doctoral Programme in Civil Engineering, Transportation and Vehicle Engineering and Informatics Sciences

International Postgraduate Programmes

LLM in Law and Governance
Expert in Law and Governance

Source: compiled by the Author

The internationalization process also brought about organizational changes: from the autumn of 2015, the Rector of Széchenyi István University created the position of Vice-Rector for International Affairs, which was filled by September 2017. In April 2017, the Rector had created the position of Rector's Commissioner for International Affairs in order to launch the international programmes and to facilitate the involvement of several members of staff preparing to teach on English-taught programmes in EFOP projects specializing in internationalization, as well as to set up research teams assigned to specific English-taught programmes and to monitor their work up to the year 2020. From October 2017, the former Vice-Rector for International Affairs became the Rector's Commissioner for International Affairs and the former Rector's Commissioner for International Affairs was appointed to be Head of the Centre for International Programmes (CIP). In January 2018, the Head of the CIP was additionally assigned to be the Vice-Rector for Educational Affairs, extended in December 2018 by the University Senate for a further three years. The creation of the position was justified by the fact that in addition to Széchenyi István University's 76 Hungarian-taught programmes, from Autumn 2019, 24 English-taught programmes are planned. The Vice-Rector for Educational Affairs retained executive status over the CIP, via which the University's internationalization processes are directly controlled.

5. Evaluating international student feedback, identifying future development trends

As the experience of the internationalization of the SZE has a concise history, the fine-tuning of its internationalization strategy takes into account international trends and the good practice of other institutions, national strategies (MHR / MIT) as well as its own international student feedback.

In order to determine institutional changes and the future directions of the internationalization process, the assessment of the satisfaction of international students was carried out for the second time at the end of the first semester of 2018/19. Last year, similarly to this year's survey, in the last week of the study period and the first week of the exam period, in the Centre of International Programmes, by employing anonymous questionnaires we asked for feedback from our international students. The main aim of this exercise was to define the important areas for repair and intervention in the teaching activities on the English-taught programmes and, in general, in the continuous improvement of the quality of University services.

In December 2017, 56 of our 142 international students and students without Hungarian citizenship and this year – in December 2018 – 70 out of 199 of the students

completed the questionnaire voluntarily. (Appendix 1). The former represents a 39% completion rate, the latter 35%.

This year, a total of 38 questions were formulated, of which 27 were multiple choice and 11 feedback from the students' responses. The questionnaire was based on that of the Michigan-based Kettering University International Education Program (IEP), which primarily provides training in STEM. The questions were modified appropriately to reflect local circumstances as well as Széchenyi University's educational structure and administrative background.

Both part-time and full-time students are generally satisfied with the University's English-taught programmes, and full-time students proved to be even more satisfied than exchange students. Our students were very satisfied with the activities of the CIP staff, expressed their satisfaction with the activities of instructors, professors, the University Library, student life, the Halls of Residence, the mentor programme and the activities of other administrative colleagues and were neutral with regard to catering and health services.

Our international students were generally dissatisfied with the menu choice of the university canteen. Suggestions for improvement were connected with the menu system, with most feedback requesting pork-free dishes. Also, just as many respondents called for vegetarian food, the inclusion on the menu of various international cuisines, a broader choice on the menu and the translation of the names of dishes into English.

From the responses, we conclude that the professional knowledge of the international students on Széchenyi István University's English-taught programmes has significantly increased and deepened. Our academic programmes prove to be very useful for practical professional competencies and career building. Again, it is stated that full-time international students are much more satisfied than the exchange students; among the former, the most satisfied with the practical orientation of the programmes are students on the BSc in Vehicle Engineering, the MSc in Vehicle Engineering and the BA in International Studies. 91 percent of respondents indicated that they would like to participate in training together with Hungarian students, 8% did not want 'mixed' student groups; for certain subjects barely 1% of students indicated that they saw any good in joint training.

Our international students are somewhat satisfied with the voluntary student mentoring system. The students of Vehicle Engineering, Supply Chain Management and International Studies were more satisfied than the average.

Several students who responded to the questions related to the Hungarian language lessons were asked for their suggestions and opinions. The students expressed a need for more thorough teaching of Hungarian grammar and more speaking practice-based

language teaching. Several full-time students expressed the need for Hungarian language and culture to be available throughout their programmes.

Our international students are attracted to Győr for the following reasons:

- It is considered to be a peaceful, quiet, safe, uncrowded town, where everything can be easily reached on foot.
- This is followed by the kindness of the people of Győr, and despite language difficulties, a manifest inclusive community attitude.
- Ranked in third place are the city's beautiful natural surroundings and rivers, as well as the well-organized public transport, including the free City Bus.
- After the historic city centre, in fifth place is ranked...
- the University Campus. In terms of popularity, the Campus is a long way ahead of Győr's restaurants, entertainment venues, cleanliness of the city or the favourable location of Győr between three countries' capitals.

Infrastructure investments were recognized not only in the feedback from foreign students but in April 2019, Széchenyi István University's campus was voted 'Best Campus in Hungary' by Eduline subscribers. (EDULINE 2019). Ninety-four percent of our international students live in one of the University's Halls of Residence, all but one on-campus. On the subject of these buildings, some which were built for the 2017 European Youth Olympic Festival and others which were renovated, many international students in their elaborated responses praised them as being better than those at any other University in Hungary.

Győr's greatest deficiencies:

- Respondents have identified the low number of international restaurants, but this has also been more specifically listed as a lack of, or an insufficient number of, vegetarian, Arabic, Indian, Chinese, Italian and Spanish restaurants. In order to prepare certain Asian dishes, it is necessary for our international students to purchase appropriate ingredients from Vienna or Budapest.
- Critical comments on international cuisine are followed by the lack of English language skills in Győr. Although the vast majority of respondents are convinced of the courtesy and helpfulness of the people of Győr, they note that the resident population's lack of language skills is a significant obstacle when it comes to the use of services (eg. shops, sports programmes, cinemas).

Student feedback and suggestions were presented to the Rector's Cabinet and the Senate by the Vice-Rector for Educational Affairs, and with the approval of these bodies, the management of Széchenyi István University reacted to foreign student feedback almost immediately.

The entire range of menu options in the Széchenyi Restaurant - the students' most popular canteen for lunch - has also been displayed in English. (In providing daily choices the management takes into special consideration diverse intolerances and the special vegetarian and Asian diets.) "The Hungarian Language and Culture" course will be available for international students from September 2019 with additional teachers and a higher number of hours. The University's management consulted the University Student Council (USC) on the reform of the mentoring system. During discussions, it was discovered that some of the shortcomings of the mentor system are due to the loss of enthusiasm / motivation of the students participating in the programme. As a solution, the USC's Committee on Foreign Affairs proposed the introduction of a monthly scholarship for coordinators leading the mentor groups and the award of one-off scholarships at the end of the semester to mentors not in leader positions. The latter is proposed to be drawn up in a manner commensurate with the quality and activity of the work by the leaders of the Foreign Affairs Committee. Based on their suggestions, the programmes organized for our international students as well as the professional in-service training organized for the leader-mentors would receive financial support.

In December 2019, following the launching of a significantly increased number of English-taught programmes, we are again initiating the completion of student questionnaires, as a result of which the annual feedback is expected to shape the University's internationalization strategy.

6. Summary

The process of internationalization of Széchenyi István University goes back three years and was preceded by a broad infrastructural renewal and comprehensive curriculum reform. The latter aimed to reallocate teaching and research capacities to English-taught programmes and research carried out in English. The process was supported by a number of projects awarded to the University, mainly from EU sources. Between 2015 and 2019, the number of English-taught programmes on offer increased from two to twenty-four, and the University also appeared on international rankings (QS Stars & QS Rankings). As the experience of internationalization of SZE has a concise history, the fine-tuning of its internationalization strategy takes into account international trends and the good practice of other institutions, national strategies (MHR / MIT) and its own international student feedback. For the latter, the institution's senior management endeavours to react with immediate interventions and changes.

References

KSH (2018): Gyorstájékoztató, Munkanélküliség, 2018. január-március. Available at http://www.ksh.hu/docs/hun/xftp/gyor/mun/mun1803.html

MHR (2014): Fokozatváltás a felsőoktatásban, A teljesítményelvű felsőoktatás fejlesztésének irányvonalai. Available at http://www.kormany.hu/download/d/90/30000/fels%C5%91oktat%C3%A1si%20koncepci%C3%B3.pdf

MIT (2018): Innovációs és Technológiai Minisztérium: Általános Gazdaságfejlesztési Stratégia (2018-2030) Munkaanyag, 2018 Október.

SZE (2016): A Széchenyi István Egyetem Intézményfejlesztési Terve (2016-2020). Available at https://if.sze.hu/downloadmanager/index/id/848/m/3732

SZE (2019): A Széchenyi István Egyetem története. Available at https://uni.sze.hu/egyetem-tortenete

Appendix 1: Quality assurance questionnaire

1. Please indicate the academic programme you are part of:

   a. Full programme
      i. SZEEDSM Doctoral Programme
      ii. Marketing MSc
      iii. Supply Chain Management MSc
      iv. Infrastructure Engineering MSc
      v. Vehicle MSc
      vi. Vehicle Engineering BSc
      vii. International Relations BSc

   b. exchange programme

2. How satisfied are you overall regarding the IEP (International Education Programme) experience at Győr? *(1 very unsatisfied – 2 unsatisfied – 3 somewhat unsatisfied – 4 somewhat satisfied –5 satisfied – 6 very satisfied – 0 Not applicable)*

   1 - 2 - 3 - 4 - 5 - 6 - 0

3. How beneficial did you find your academic programme? *(1 very unsatisfied – 2 unsatisfied – 3 somewhat unsatisfied – 4 somewhat satisfied –5 satisfied – 6 very satisfied – 0 Not applicable)*

1 - 2 - 3 - 4 - 5 - 6 - 0

4. Please share your overall satisfaction with the following staff and services relating to your study abroad experience *(mark only one cell per row please)*

	Completely unsatisfied	Somewhat unsatisfied	Neutral	Somewhat satisfied	Very satisfied	Not applicable
Centre of International Programmes						
Teachers and professors						
Dining services						
Library						
Student life						
Student Halls of Residence						
Student Service Centre (AKIK)						
Mentor programme						
Health service (campus doctor)						
Other staff and colleagues on campus						

5. Which other offices did you receive support from? Were they helpful?

Completely unsatisfied	Somewhat unsatisfied	Neutral	Somewhat satisfied	Very satisfied	Not applicable

Centre of International Programmes

6. Overall, how helpful is the office staff? (Not helpful (1) – Very helpful (5))

1 - 2 - 3 - 4 - 5

7. The amount of available information from the IPC staff is:

Not often enough – just right – too much – other:……..

8. How accessible is the IPC staff during office hours?

a. They are never available when I need them
b. They are rarely available when I need them
c. They are usually available when I need them
d. They are almost always available when I need them
e. They are always available when I need them
f. Other: ……

9. In which ways could the IPC staff improve their service?

Classes/courses and Professional Development

10. How well did you know the subjects you studied at SZE BEFORE you began?

☐ Poor
☐ Fair
☐ Satisfactory
☐ Very good
☐ Excellent

11. How much did you improve your knowledge of your main subject by attending classes at SZE?

☐ Not at all
☐ Slightly
☐ Somewhat
☐ A lot
☐ Immensely

12. How well will your classes at SZE contribute to your skills and knowledge for your career?

☐ Poor
☐ Fair
☐ Satisfactory
☐ Very good
☐ Excellent

13. Would you wish to participate in lessons together with Hungarian students?

☐ Yes
☐ No
☐ Partly, in some lessons

14. Please tell us how helpful the Hungarian language course was for you.

☐ Poor
☐ Fair
☐ Satisfactory
☐ Very good
☐ Excellent

15. Do you have any suggestions or comments regarding the Hungarian language course?

16. How much were you able to get to know Hungarian culture? Please list the positive experiences. If you had negative experiences, please, indicate those too.

17. Please name those cities (both in Hungary and abroad) and the countries you have visited during your studies.

18. Please name the 3 things you like the best about Győr. (Feel free to say anything….)

19. Can you tell us what is missing in Győr which you would like to have? (feel free to say anything….)

20. Has anybody in your family, friends visited you in Győr?

a. Yes, 1 / 2 / 3 /5 / more people (please mark the number of your visitor)
b. Not yet

21. How much time did they spend in Győr? (please mark the number of nights/persons)

c. 1 / 2 / 3 /5 / more nights
d. Not applicable

22. Was this your first time visiting another country? *(Mark only one cell please)*

☐ Yes
☐ No

Housing and Dining

23. Where is your accommodation during your studies?

e. On-campus Hall of Residence K0 /K1 / K2 / K3 / K4
f. Off-campus Hall of Residence
g. Renting a flat

24. Please tell us your level of satisfaction for the following items related to your apartment in the Hall of Residence? *(mark only one cell per row please)*

	Completely unsatisfied	Somewhat unsatisfied	Neutral	Somewhat satisfied	Very satisfied	Not applicable
Cleanliness of the room upon arrival						
Cleanliness of the Hall of Residence						
Feeling safe at the Hall of Residence						

	Completely unsatisfied	Somewhat unsatisfied	Neutral	Somewhat satisfied	Very satisfied	Not applicable
Laundry facilities						
Service by the staff of the Hall of Residence						
Level of Noise						

25. Please tell us your level of satisfaction for the choice of dishes at the Restaurant (*Menza)* on campus?
(1 very unsatisfied – 2 unsatisfied – 3 somewhat unsatisfied – 4 somewhat satisfied –5 satisfied – 6 very satisfied – 0 I don't eat there)

1 - 2 - 3 - 4 - 5 - 6 - 0

26. Were you able to buy groceries when you needed them?

☐ Yes
☐ Most of the time
☐ Only some of the time – I had trouble getting to the store
☐ No
☐ Other:……
……

27. Were you able to find food at the grocery store that you like to eat?

☐ Yes
☐ No
☐ Other:……
……

28. Are there ways we can make your on-campus dining/meal experience better? Do you have any additional comments related to housing and dining?

Mentor system

29. In how many events did you take part this semester?

1 – 2 – 3 – 4 – 5 – All of them

30. Which event/events did you like most?

☐ Welcome Party
☐ Győr Hunting
☐ Halloween Party
☐ International Dinner
☐ Pub Crawl
☐ ActiQuiz
☐ Other (please specify):

31. In which kind of events would you like to take part next semester? (If you have any new ideas, please share them with us)

Your mentor's work

32. How many times did you meet your mentor this semester? *

h. I did not meet with my mentor
i. 1-2 times
j. 3-4 times
k. more than 4 times

33. With which things did your mentor help you? *

l. My residence permit (Immigration Office)
m. At the tax office
n. My student card
o. My university card
p. Getting a Hungarian phone number
q. Other (please specify):

34. How satisfied were you with your mentor's work? *(1 very unsatisfied – 2 unsatisfied – 3 somewhat unsatisfied – 4 somewhat satisfied –5 satisfied – 6 very satisfied – 0 I did not need a mentor)*

1 - 2 - 3 - 4 - 5 - 6 - 0

35. Which social media platform/platforms do you use the most to get in contact with each other?

r. Facebook
s. Messenger
t. Instagram
u. Whatsapp
v. Other (please specify):

36. What aspects of the study experience were most useful or valuable? How would you improve the programme overall?

37. Feel free to share any comments or suggestions here. As this survey is anonymous, unless you wish to include your name, we will be unable to provide individual feedback on your problems if required.

38. Please share any positive or negative experiences you have had while in Győr that you would like us to know about. If negative, please tell us how you tried to resolve/address the issue. Please remember this survey is anonymous, so unless you leave your name, our ability to address some concerns will be limited:

Thank you very much for your collaboration!

Facing the Challenges of Erasmus+ Mobility in the Periphery

Janka HUJÁK, Jakub DOSTÁL

Abstract

The paper focus on a topic, which rarely occur in the literature; the international mobility in HEIs in the periphery, with the focus on the Erasmus+ program. Our focus was the University of Pannonia (Hungary) and the College of Polytechnics Jihlava (Czech Republic), two higher education institutions (HEIs) in the periphery. Both in Jihlava and Veszprém, we used semi-structured interviews with the person responsible for ERASMUS+ mobility in the HEI. The purpose of the interviews was to identify actual trends and challenges in the field of international student mobility. We conducted a SWOT analysis for each HEIs, and conceptualise the two present challenges for HEIs in the periphery: first, institutional growth with a further improvement of the compatibility of the credit and curricula systems, the flexibility of the system and also Erasmus friendly environment. Second, promotion growth, regarding sharing the marketing approach in promoting outgoing students mobility.

1. Introduction

Economics and other researchers have searched how to maximise the human potential of society, especially younger generations. It is the question which matters in individual countries, regions and continents. This question is important also for universities since they focus on developing human capital in the first place. Recently, there is more emphasis, even in the post-socialist countries, on the internationalisation of higher education, which might contribute to this goal. If we define internationalisation as the process of "integrating

an international, intercultural, or global dimension into the purpose, functions or delivery of (postsecondary) education" (Knight, 2003, p. 1), it is logical, that it also includes student mobility.

Furthermore, European countries are facing unprecedented changes in international student mobility. An increasing number of students travel abroad either for exchange programs or for full study programs in different countries. In fact, "international student mobility has become an increasingly important part of the global higher education landscape" (Verbik & Lasanowski, 2007, p. 3). This matter is an integral part of the internationalisation of higher education, which is a very common part of higher education institutions' (HEIs) strategies.

As Gacel-Ávila (2005, p. 112) stated, "internationalisation strategies are crucial for the education of the 21st century." One part of the issue is the internationalisation strategy of the institutions; the other part is the governmental or intergovernmental strategy. A significant stakeholder in this area is the European Union, which fosters the European Higher Education Area (EHEA). The EHEA was called to existence in 2010, and its top priorities are the internationalisation and the increase of student mobility (Bologna Process, 2010). EHEA Ministers in 2012 adopted the strategy "Mobility for Better Learning", which set a target that by 2020 minimum 20% of the graduates should have had a study or training period abroad (European Higher Education Area, 2011). Later, in 2015 and 2018, the EHEA Ministerial Conference reconfirmed the importance of the increase of student mobility (Bologna Process, 2015; Bologna Process, 2018). Furthermore, the use of the ERASMUS+ programme has been further encouraged (Bologna Process, 2018). The continued popularity of the programme is best shown with numbers. In 2016 nearly 3900 HEIs participated in the programme (Erasmus Annual Report, 2016).

Through the years the Erasmus programme changed a lot. The ERASMUS (an acronym for European Region Action Scheme for the Mobility of University Students) was launched in 1987 aiming to build a European identity. It was created to enable students to spend between 3 to 12 months in another European country – either for studies or for an internship. Any student enrolled in a participating higher education institution in one of the 34 ERASMUS countries can benefit (the EU Member States plus former Yugoslav Republic of Macedonia, Iceland, Norway, Liechtenstein, Turkey, Serbia). In 2007 ERASMUS was integrated into the European Commission's new educational umbrella programme, the Lifelong Learning Programme (LLP). Since 2014 the ERASMUS+ programme became the umbrella programme as the EU's programme for education, training, youth and sport. It includes three key actions: mobility of individuals (KA1); Cooperation for innovation and the exchange of good practices (KA2) and support for policy reform (KA3) (ERASMUS+ Guide, 2018).

In this paper, we are focusing on the KA103 Higher Education Mobility within KA1. Furthermore, we narrow down our centre of interest to student mobility - not considering staff mobility. Student mobility gives the majority of all mobilities, while staff mobility remains on a stable level with approx. 15% share through the years (European Commission, 2016). For better understanding, in the rest of the paper, ERASMUS+ refers solely to the higher education student mobility programme component.

ERASMUS+ is a credit mobility programme. By definition, credit mobility is a "mobility of shorter duration (up to 1 academic year) which takes place in the framework of ongoing studies at a home intuition. After the credit/temporary mobility phase, students return to their home institution to complete their studies" (Teichler et al. 2011, p. 27). Student mobility has numerous benefits and impacts on both the hosting and receiving institution and their micro and macro environment. Among the benefits of ERASMUS+, there is one, which may be crucial for HEIs in the periphery; it can generate income indirectly and in the long run. In the following, the income generating possibility of the ERASMUS+ will be introduced.

It is important to note that an institution's participating in the ERASMUS+ program can no way generate income directly. On the one hand, institutions receive no money from this credit mobility programme. On the other hand, income is generated from the tuition-fee paying international students coming to complete degree programmes (degree mobility). The authors state that the increase in the intensity of the inward credit mobility may increase the number of students involved in inward degree mobility in a given institution. The reason behind this assumption is that the exchange students who had had a good experience during their short-term student mobility period may want to continue their education in the same host institution with a degree programme (Huják, 2015b). The more students arrive with ERASMUS+; the more tuition-fee paying international students will enrol. However, the relationship between the number of incoming credit mobility students and the incoming tuition-fee paying degree mobility students is not linear. We had better say that the volume of incoming ERASMUS+ students is a component of the determinants of the volume of the incoming international degree mobility students. This is why the volume of ERASMUS+ mobility is important for an institution.

This paper is going to introduce the current challenges of the ERASMUS+ mobility in the periphery. The centre of our focus is the Central and Eastern European (CEE) Region. The authors focus solely on those higher education institutions, which are smaller institutions, are located outside the capitals and popular tourist destinations with a relatively limited offer in English courses. Such HEIs are specific for several reasons, which will be discussed further in the text. The authors named these institutions *HEIs in the periphery.* This expression intends to point out that these institutions are out of the

mainstream of international mobility and are often out of the internationally mobile students' focus. Still, they are important members of the higher education sector.

The expression of "higher education institutions in/on the periphery" has been used before. Klemencic (2015) gave a comprehensive image of such institutions. Important attributes of these universities are that their location is less attractive for non-citizens. Furthermore, their capability of attracting (foreign) talent is lower than "centres" (Klemencic, 2015). The roles that universities in the periphery play in their regions are also in the researchers' centre of interest (Kohutek et al., 2017, Benneworth Ed., 2018).

In the current paper, the authors' definition of *HEIs in the periphery is the following: smaller higher education institutions (HEIs) outside of the mainstream of international student mobility.* Hence, further characteristics have been identified to form a homogenous group of HEIs. HEIs in the periphery are located outside of capitals and popular tourist destinations, furthermore church HEIs and foreign HEIs in the given country are not included. Applying this definition, the HEIs in the periphery in Hungary and the Czech Republic were identified.

2. Material and method

We conducted a literature review with the focus on the specifics of HEIs it the periphery and the barriers and challenges of ERASMUS+ mobility. In choosing a region for our investigation, we have chosen Visegrad four (V4) area, while it has its specifics, and also because of the practical relevance for our institutions. Using the above-introduced definition for HEIs in the periphery, the authors identified the relevant institutions in both Hungary and the Czech Republic.

Next, we have formulated the following criteria for choosing the HEIs:

- Location in the periphery - outside of the national capitals, big cities (150,000 more) and their agglomeration
- not HEI offering only theological programmes
- not foreign HEI in the country
- Working students mobility programme (in and out) - credit mobility
- Having international students in the regular programs - degree mobility
- Data availability (decisive criterion)

In order to find the HEIs in the periphery in the Czech Republic, we applied following criteria: 1) not foreign HEIs, 2) not in the capital (Prague), 3) not in the other cities with greater population than 150,000 (Brno, Ostrava, Pilsen). As a result, 19 HEIs have been listed out of 80 as higher education institutions in the periphery. The College of

Polytechnics Jihlava from the Czech Republic and the University of Pannonia from Hungary serve as case studies of HEIs on the periphery. The decisive criterion for choosing these HEIs was data availability.

In order to find the HEIs in the periphery in Hungary, we applied a slightly different process, based on the specifics of the national educational systems. First, a three-step elimination process was applied. First, from the total list of 83 HEIs in the country, the foreign 18 HEIs were eliminated. Second, those were eliminated that are located in the capital and/or are HEIs focusing only on theology. This resulted in a list of 18 institutions. Third, those most prominent three countryside universities were eliminated that have more than 7,000 students (the University of Pécs, University of Szeged, and University of Debrecen). This resulted in a list of 15 HEIs. Nevertheless, the HEIs selected for this case study would fulfil both this selection processes; therefore it has no direct impact on the results of the case study. However, further research on defining HEIs on the periphery is still desirable.

We have conducted semi-structured interviews with managers/coordinators responsible for Erasmus+ mobility in the HEIs (one per one HEI, two in total). The interviews took place in November 2018, and the research questions were based on the literature review and past research of the authors. The interviews were conducted in local languages (Hungarian and Czech) and were recorded. Afterwards, they had been transcribed and translated into English. The final versions of the transcriptions were approved by the respondents.

We used simple coding for sentences and paragraphs relevant to each of our researches' elements (numbers of students participating in ERASMUS+, challenges of the HEI in the perspective of ERASMUS+ mobility, tools and policies for promoting the mobility, etc.). Based on this data, we formulated a SWOT analysis for each HEIs. In the next phase, we have formulated suggestions for future research, while this was a pre-research, and also a formulation of recommendations.

3. ERASMUS+ student mobility in the Czech Republic and Hungary

The volume of the higher education sector shows similarities in Hungary and the Czech Republic. Table 1 shows that the number of HEIs in the two countries are roughly the same as the same amount of public HEIs. Considering that the populations are almost the same (CZ: cca. 10.58 million, HU: cca. 9.781 million); in the Czech Republic approx 407,000 inhabitant falls to one public HEI while in Hungary this number is 349,000.

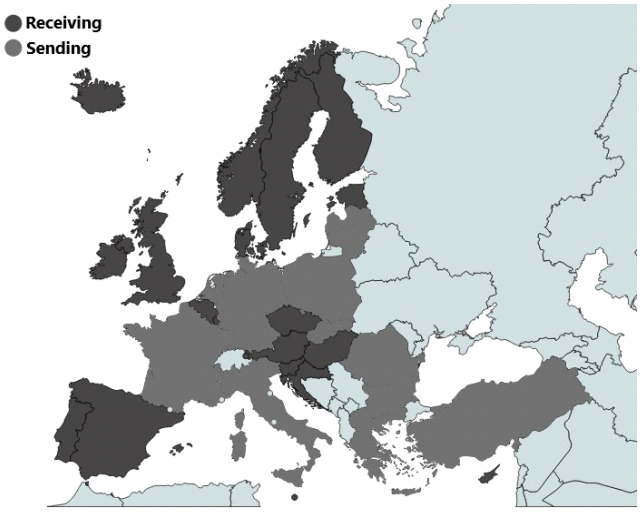
Table 1. Higher education in the Czech Republic and Hungary in 2017/18

	Czech Republic	**Hungary**
No. of HEIs	80 (with 16 foreign)	83 (with 18 foreign)
No. of public HEIs	26	28
No. of students in HE	299,054	283,350
No. of students received with Erasmus+	9,286	5,707
No. students sent with Erasmus+	8,015	4,135

Source: Own compilation based on data from the Czech Statistical Office, 2018 and Educational Authority in Hungary, 2018.

It is worth to mention that even though the numbers of students enrolled in higher education are similar, the number of participants in the ERASMUS+ programme is almost double in the Czech Republic than in Hungary. In 2016 Hungary received 5,707 students for student mobility and traineeship and sent 4,135 students, while the Czech Republic received 9,286 students and sent 8,015 students (Table 1). These numbers indicate that with sending/receiving ratio 0.72 in HU and 0.86 in CZ both Hungary and the Czech Republiccan be classified as rather receiving countries than sending ones (Map 1.)

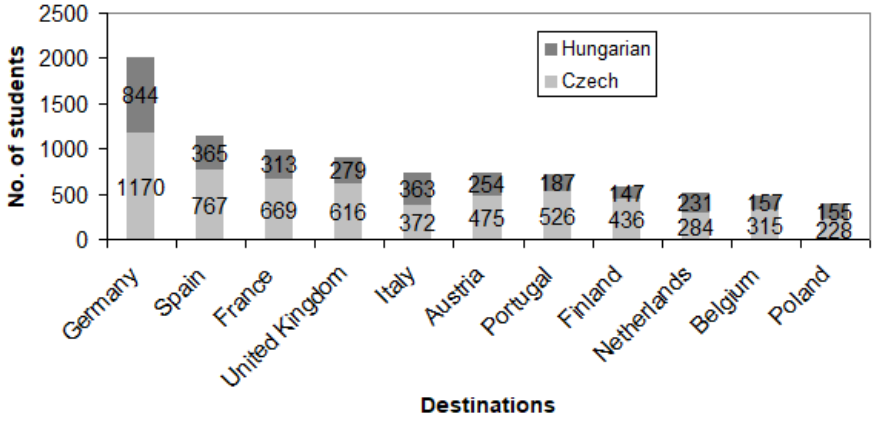
Figure 1. The location of sending and receiving ERASMUS+ countries



Own compilation based on data from Erasmus Annual Report 2016. See data table in Appendix 1.

Having a closer look on the outward student mobility (Figure 1), we will see that in 2016 the top ERASMUS+ destinations for Hungarian students were Germany, Spain, Italy, France, UK, Austria, Netherlands (European Commission, 2016). On the other hand, the top destinations for Czech students were Germany, Spain, France, UK, Portugal, Austria, Finland. Consequently, the preferences of Hungarian and Czech outgoing students are similar.

Figure 1. Top 12 ERASMUS+ destinations for Hungarian and Czech students



Own compilation. Based on Erasmus Annual Report 2016. See data table in Appendix 2.

4. Case studies from Hungary and the Czech Republic

In the following, the case studies of two higher education institutions in the periphery will be introduced from ERASMUS+' point of view. It is important to note that we focus solely on business studies. It is essential to differentiate fields of study since there are significant differences in student mobility attributes among the fields. We know this from experience. For example, Hungarian engineering students are less motivated to spend a semester abroad, because their field of study is considered relatively difficult, and students are reluctant to take the additional burden of a semester abroad. On the other hand, students of philology (such as language studies) are generally highly motivated to study abroad and perfect their language knowledge. Throughout the years, business students studied abroad with ERASMUS+ in the largest numbers. The top study fields in Erasmus mobility

are business, administration and law, arts and humanities, engineering, education, and social sciences and journalism (Erasmus Report, 2016).

The University of Pannonia (UP) is located in Veszprém, Hungary (note: apart from Veszprém, UP has three more minor campuses, which give the minority of students). Veszprém is a historic town close to the capital of Hungary, in the heart of Europe with approx 56.000 inhabitants. Although it has historical attractions and the vicinity of Lake Balaton attracts here holidaymakers, Veszprém cannot be listed as a top tourist destination. The university was founded in 1949. UP has five faculties offering a wide range of academic programmes on both bachelor's (undergraduate) and master's (graduate) level. UP had 4257 enrolled students in the academic year 2017/18. Based on the characteristics mentioned above the University of Pannonia is on the periphery from international mobility's perspective. The Faculty of Business and Economics gives approx. 30% of the university's students; it had 1161 enrolled students in the academic year 2017/18.

The international mobility has been a focus of interest of the Faculty of Business and Economics, UP for years. Some years ago, a thorough study was made in the topic (Huják, 2015a). That research surveyed 239 bachelor's and master's students about their attitude towards the ERASMUS+ programme. The goal was to map those factors that discourage or deter students from applying for the ERASMUS+ mobility. The first important finding was that 92.5% of the respondents have heard about the program and interestingly 75.7% of them have already thought about participating in the program, but still have not applied. So it was not the lack of awareness that resulted in low application numbers. Instead, the financial barriers proved to be the most influential discouraging factor. Further fears of students were (in the order of highest ratings): "I am afraid that it would prolong my studies"; "I do not want to leave here my family/friends"; "I do not want to go alone" and "I am not confident about my language knowledge" (Huják, 2015a).

In 2018 an in-depth personal interview was carried out with the international coordinator of the Faculty of Business and Economics, UP. The goal was to explore the current challenges of the Erasmus programme at the Faculty. A further aim was to see whether the findings of the earlier research can be confirmed or not. Although from methodology's point of view, the results of a large-sample survey and an in-depth interview are not comparable, still it is worth to have a look at Table 4. The coordinator interview confirmed the earlier survey results. The only difference was in the ranking of the factor "lack of information", which can be explained easily; coordinators and students are on the opposite side of the information. Thus their perception is different.

Table 4. Comparison of findings. Ranking of the discouraging factors in the order of importance

Discouraging Factors	student survey 2015	coordinator interview 2018
Financial constraints	1	1
Lack of information	2	8
Curricula incompatibility	3	2
Discomfort with leaving family/friends	4	3
Discomfort with going alone	5	4
Lack of confidence with language knowledge	6	6
Lack of suitable partner institution	7	7
Choosing another programme	8	5

Own compilation.

The interview of 2018 revealed further issues that should be investigated in further research. As the ERASMUS+ Faculty coordinator said:

> The Erasmus is underused at the Faculty; much more students should apply for it. So now this is our big challenge together with the university level International Office.

Currently, the biggest challenge is the difficulty of credit transfer. Students find it difficult and often fail to have the abroad-earned credits accepted home. As the coordinator said:

> So students must count with the high chance of not finishing his/her studies in time and having to take extra semesters. It is because he/she will not be able to transfer all credits that he/she earned abroad. Or better said, he/she will not be able to get those credits accepted as obligatory courses in the curriculum. Furthermore, now 90% of our students are tuition-fee paying student, which was not the case some years ago.

That means that if the student's studies are prolonged with 1-2 semesters, because of the Erasmus semester spent abroad, his/her family must pay the tuition fee for these extra semesters." To resolve this problem, the coordinator suggested the following:

> So I think the Faculty should be more flexible, for example, to allow students to do exams online, on Skype etc., while they are abroad. [...] So I think more flexibility is needed in this sense to help the student follow the courses in Veszprém while they are abroad.

Another big challenge is the promotion of Erasmus. Although most of the students have heard about the programme, they do not know the details and the benefits of the

programme. The International Week that is organised each autumn is an excellent opportunity for promotion.

> For example, during the International Week, that we [the Faculty] organise, we dedicate the International Office [university level] a whole day, when they introduce the available programmes to facilitate outgoing mobility.

However, it is experienced that a "competitor programme", which is Campus Mundi run by the Hungarian government takes students from the ERASMUS+. Campus Mundi has similar features[55] to ERASMUS+ student mobility, and in some features, it is more attractive to students. Campus Mundi, for example, has no limitations for the destination (students can travel to any continent) and provides a higher monthly grant.

> For the Erasmus, it is a problem that another programme, Campus Mundi takes many students. Campus Mundi offers higher grants and allows students to study anywhere in the world without a bilateral agreement between the universities. So this is a competitor of the Erasmus programme.

When promoting the University of Pannonia as an Erasmus destination for incoming students, the focus is on the "small-town environment", the historical treasures of Veszprém, the fact that it is a perfect starting point to explore Hungary, and the great veriety of courses offered in English. It is also communicated that Veszprém and the university offer plentiful cultural happenings, free-time and sports activities. As Veszprém is a nominee for the title European Capital of Culture 2023, this can also be emphasised in the promotion, suggested the coordinator.

> We can not compete with the universities in the capital. However, there are numerous things that we have as an advantage. There are plenty of cultural happenings; many sport activities offered by the university, the town is beautiful, the air is clean. Students may find numerous opportunities for free-time in the vicinity. Veszprém has a good location. We try to emphasise these.

Regarding the periphery attribute of the University of Pannonia, the coordinator experiences that students from such smaller towns (like Veszprém) are more attached to their families and fewer families can afford their student children an abroad semester than in bigger cities.

> If we have the chance to talk in person [with the students interested in the Erasmus], they tell me – which is by the way confirmed by certain surveys as well – that they

[55] For a detailed comparison of Campus Mundi and Erasmus+ please see Appendix 5.

> don't feel comfortable without their family and friends or partner. However, these Erasmus semesters are so useful. I think one semester from life for such an experience is not a too big investment.

The College of Polytechnics Jihlava (CJP) is located in Jihlava, Czech Republic, as the only public higher education institution in the Vysočina region. Jihlava is a historical town in between the country´s two biggest cities, and capitals of historical countries Bohemia and Moravia, Prague and Brno. Jihlava has about 49,000 inhabitants. Although it has historical attractions, and it is close to the more popular destinations, Jihlava is not among the country's top tourist destination. The college has six departments offering a wide range of academic programmes on both bachelor's (undergraduate) and master's (graduate) level, while the latter is less common. CPJ had 2,299 students in all the programs enrolled students in the academic year 2017/18. Based on the characteristics as mentioned earlier also, the College of Polytechnics Jihlava is in the periphery from international mobility's perspective.

Two out of six departments are offering bachelor economic study programs: Finance and Management (provided by the Department of Economic Students) and Tourism (provided by the Department of Travel and Tourism). The number of students in studying these programs is 1,152 (50.1%). The others are the Department of Social Work, Department of Health Care Studies, Department of Technical Studies and the Department of Mathematics.

In the next part, we present the result of the interview with the Head of the International Department of College of Polytechnics Jihlava. We found that the general challenge is the diminishing trend in the willingness of the students to study abroad for one semester or two. The college organises the International Business Week (IBW) (see Chalupová, Černá and Prokop, 2016), a one-week international students mobility program, where the situation is different. In the ideal case, the IBW should be the tool to help to hesitate students to go for a whole semester or two Erasmus stay to go. As the interviewee said:

> The ideal purpose of this International Business Weeks or short-term mobilities abroad should be that students who have some fear to go abroad, e.g. because low self-esteem about the language skills, that they will find within the week that they can communicate in English with students from other countries. That they can work in a foreign language and they can exist in it. We would like this mobility to be a motivational tool for the students not to be afraid to go abroad in Erasmus longer-term mobility programs.

While there is some correlation among people who went to the IBW and whole semester or two Erasmus say, the question is the causality. This case is currently being

investigated by the International Department. Regarding the barriers of outgoing international student mobility, the biggest one for the College regarding the respondent was the language:

> So really the reason number one, at least what is said by students is the fear that their language skills are not at an appropriate level so that they could study and exist abroad. If we hear it from students, we tell them that this is exactly the reason why they should go abroad. If they are afraid that their English is not at an appropriate level, this is the reason why they should go. The students who let us persuade them are later confirming that we were right.

The respondent mentioned an interesting point about the fear of the students from insufficient language knowledge. He said that in this perspective, the students who let the International department persuade them to apply, later tell them that they were right. Regarding the other barrier, the possible prolonging of the study, the respondent said:

> (It) is important for us and also them to communicate with academics so that we can avoid the situation that the students will have to do the semester, or the whole academic year, again. We are also trying to tell then that it is not a lost year or semester, but a year or semester they will receive. So changing this thinking of the students will be great.

We can see two ways of dealing with this worry. First, communicate with students (so as with academics) so that it would be possible to finish in time. Second, trying to communicate with the students that even if they have prolonged the study, it is not the semester or year they lose, but that is something they will receive. The other thing was the rise of other possibilities for travelling outside the study:

> The other thing is that for some student going abroad is nothing special because they can go abroad wherever they like. What are we saying them is that this is the first and last time somebody is telling them you have a certain sum of money for going to study or for an internship abroad. Explain this to them is very difficult.

Therefore, despite the rise of other possibilities of travel, the International Department is trying to emphasise that ERASMUS+ is still a unique opportunity regarding financial and administrative assistance. At authors' best knowledge, we have not found any other mobility program like ERASMUS+ of a similar extent, financial and organizational coverage for the students in the Czech Republic. Although some of the most prominent universities might have another local mobility programs for the students, this is not the case of the College. The College also encounters certain complication regarding accommodation for incoming international students, because of the limited capacity of dormitory; international students need to be accommodated in private facilities:

> It would be great if our college would have accommodation facilities for incoming students at a certain level. We are in the situation when our dormitory is full, that we cannot offer them to our students. We are trying to help them to find accommodation in private. We are lucky that we were successful in all cases. It is not easy, because we are in a strange position where we said this is your private thing, you find accommodation in Jihlava. It is not easy for them, because they do not know it here, they do not know accommodation providers, but on the other hand, the accommodation contract is between these two parties, the provider and the one who is accommodated here, the student.

Nevertheless, the College is offering assistance to international students. Although this is generally viewed as a weakness, for some students it might be a good thing, if they stay in private with the friend they choose. However, a situation like this also highlights the positive aspects of smaller HEI:

> If this would be different, and it is like this at some of the schools our students are going, that the college would have dormitory with twenty reserved beds for Erasmus students that would help us a lot. However, I think that a service the foreign students are having in our college they do not have in any other bigger school. We are a small college, and we take this is as an advantage, while they would not have such personnel approach elsewhere. They will come to our office (International Department), and somebody is always able to talk to them and help them, maybe this is one of the reasons why they are coming here.

Therefore, international students might encounter a more personal attitude, even in a complicated situation, due to the smaller character of the college. A big challenge for the College is also the institutional growth. Despite receiving international students for many years, the College still does not have a working Information system in English. As the representative said, the College is working on the progress in this field:

> It was one of the things I had started to deal with a year ago when I came here, and I know that this topic was discussed several times, it is, of course, a complication. They need information, and they need them in English. So yes, we have encountered it, and we are quite close to the solution. The translation should be ready by now so it has been handled to the IT department and should be soon introduced. Anyway, we will see when it is launched.

Another step in this direction is the digitalisation of the processes:

> There are papers, documents circulating; we sign them, scan them, sent them, even within our college, the student department, international department. So the digitalisation will have to be done sooner or later, we are trying it to be sooner. What

> we do not want is to create something, which will not be compatible with other systems.

Concerning the efforts of the College in supporting the international student's mobility, the respondent reported several actions. First, encouraging academics and lecturers to make the ERASMUS+ stay for the students flexible, both for the students going abroad and for the international students coming to the College. The respondent also mentioned the importance of the enthusiasm of the academics for international student mobility programs:

> If the students will see the support from their teachers and they will see and hear an academic, who will from time to time say: I was abroad, I learned this, go study abroad, and the academics would support that it will help a mobility a lot.

This statement presumes that it is not only about marketing and promotion but also about the general organisational culture of the HEI, where it is "normal" and beneficial to go study abroad. The respondent also mentioned a possible centralised policy toward international student mobility:

> The other thing practised by some schools for boosting the number of outgoing mobilities is making it an obligation for students of some of the fields of studies. Which means the students of these programs would have to go abroad during their study on Erasmus. The other question is if this should not be done by the whole of Europe so that it will be done who is studying at college or university will have to go on a semester abroad. I do not think that this should be up to the schools, while it may disadvantage some schools, and also discourage some students from studying there.

Although such centralised policy would probably require additional financial sources into EU budget, or relocation of the present ones, it might promote the international student's mobility. The question however is, what would be the opinions of the political representations of EU countries.

Concerning promotion initiatives, the respondent responded:

> We are trying to do the practical things; the program Erasmus must be seen a lot, we are going into the classes, we have a banner, we are going among the students, we are trying to be seen. We think that students can find it on the internet, but they will not probably do it. In the beginning, after they were enrolled, we have them a questionnaire and ask them if they want to do not want to go abroad and why.

One of the identified space for improvement was the increase in information among the students:

> Many of them told us they did not know about that. This is something we can do; we can give them the information so that all of them would have them. If they decide not to come based on the information, it is the b and c we can deal afterwards. The first thing is so that they would know about it, which we endeavour to promote, but it is not yet to be seen on the final numbers.

In summarising the practical tools for increasing outgoing student mobility, the respondent mentioned contact campaign in the classes, which has the best-reported outcome. Also putting a big banner on the stairs, messaging students in the information system or using social media. The respondent also said:

> We are trying to bring this information to academics, employees and then to the students. It is hard to think about any other ways how to do it. … We are not marketers, and the college has a marketing department, we have a relatively good budget on the promotion of the Erasmus. So we are also trying to do this. We bought new promotional items and we give them away.

The respondent mentioned the lack of other ideas in promoting ERASMUS+ mobility in the College. He also mentioned that a way to go might be an inspiration at the partner institutions, even though the key part would probably remain the same.

> If the easy solution does exist, somebody would already find it from the higher education institutions. We really do not think that we can invent the wheel again and we think that all the good things were probably already invented. We keep looking around, but so far we have not find anything but it is about a donkey work when you keep explaining, persuading, reassuring,

He also added the practical example of inspiration abroad:

> We look at the other schools, one of our colleagues sent us: "I saw this in the lobby in one school, look at that, what a good idea!", And it was a good idea. The outgoing students were writing some text after coming back, put three pictures; they put it in the frame, it is like a memory of Erasmus. Again, I do not think that students would come and think oh this is wonderful, let us go for the Erasmus. Anyway, it is another one-tenth which is being added. For us, it is great that it is framed and if we go to some presentation of our program, we take it from the wall, take it there and hang it somewhere in the stand.

Therefore, further inspiration among the HEIs from different countries might be a convenient inspiration. Especially among the one from the same region and from the cities on the periphery. The respondent also mentioned is the word of mouth advertising:

> What you realise is that the best advertising is when you take the student who came back into the class he or she talk with you what was it like. Or tell her friends, look, it is great, you should go too. This is the best advertising, and we keep telling them. Talk about this with your acquaintances and friends, but not tell the positive things only, also talk about your problems, because it is also why you are going there.

The word of mouth advertising is relatively cost-effective and with relatively high possible impact. Concerning the safety and security threats, the respondent sees Jihlava (similarly as Dostál et al., 2018) as a relatively safe destination with the strategic location:

> We are a safe city, which is a big advantage for some parents, who see it as there are not so many things which might distract the students. The question is whether it is an advantage for the students. I also teach intercultural communication, so I have asked them the first class what made you to choose our city. They said it is a small city, it is possible to go from here to Prague or Brno, or Bratislava or Budapest, if they want to, it is close. Although there are students who want to go to the student city where there is nightlife, and not quiet after six when the shops are closed.

He also sees it as a potential advantage for a particular group of students and their parents.

5. SWOT analyses of Erasmus+ student mobility in HEIs in the periphery

Based on the literature review and the findings of our pre-research, we are presenting SWOT analyses, one per each HEI. The focus of SWOT analyses was the perspective of Erasmus student mobility. In both cases, we identify the strengths and weaknesses of HEI in the perspective of international student mobility and then derive the opportunities from the strengths and threats from the weaknesses. The basis of the SWOT analysis was interviewed. However, we use also past studies (see Huják, 2015, Dostál et al., 2018) and general information about the HEI and the higher education sector for a broader context.

First, a SWOT analysis of the University of Pannonia.

Table 3. SWOT analysis of the University of Pannonia

Strengths	**Weaknesses**
Small-town environment for calm-seeker students Safe destination Erasmus family	Difficulty of credit transfer Relatively big costs for tuition-fee students of going on Erasmus Strong competition of Campus Mundi Difficulties to leave their family and friends
Opportunities	**Threats**
Marketing approach focusing on the advantages of a small-town environment Marketing approach focusing on the relatively safe environment Personal testimonies of the past Erasmus students (both word of mouth advertising and using in the promotion)	Students get discouraged by the risk of prolonging the studies Tuition-fee paying students are reluctant to use Erasmus Campus Mundi takes many students Decline of the interest of the young people in going to Erasmus

All the **strengths** are connected to the specifics of HEI on the periphery. The small town of Veszprém with the population not exceeding 60,000 inhabitants offers a small-time environment which might seem attractive for calm-seeking students. Therefore, it offers a slightly different perspective in marketing approaches, where to find and how to reach these students, and perhaps also their parents. What connected with this fact is that Veszprém is outside the main tourist and business sites like Budapest, which makes it the relatively safe destination in the context of big security incidents. As Dostál et al. (2018) international terrorist attack usually aims to the national symbols, very often capitals, which are also the centre of the education. There have not yet been terrorist attacks yet in Hungary neither the Czech Republic, however, both Budapest and Prague are national and cultural symbols of their countries. Therefore, if any group would consider attacking the countries, regardless of their political motivation, these capitals would be logical potential targets, based on the potential to shock and cause fear, the essential element of terrorism. Thus, in the time of fear and uncertainty, especially after an attack happens in Europe, HEIs in the city like Veszprém are often seen as a relatively safe place to study. Also, due to the small amount of incoming international students, they stick together and form a friendly group. In the University of Pannonia, they are called the Veszprém: Erasmus family. According to the respondent, it also enhances students' Erasmus experience.

As it was stated above, the **opportunities** are derived from the strengths. They all aim to use the strengths connected with using the advantages of the HEI on the periphery.

First, the small-town environment is potentially desirable for certain part students and parents are going to study abroad. As Dostál et al. (2018) showed that the parents' opinions could play a significant role in the decisions of their children. Therefore, the appropriate marketing campaign focuses on these students and their parents abroad might increase the number of incoming students. Also, the home students of University of Pannonia interested in the study abroad can choose from the HEIs in a similar environment, which might help to deal with their fears from going abroad. Analogically in the second point, there are probably a certain part of students and their parents, both home and abroad, who are worry about security threats like international terrorism. Using this as a strong marketing point might not only enhance the situation now, but it can also serve as a prevention for the future if the security situation in Europe gets worse. The third point is connected with the using of "soft data" in the promotion of the home HEI as an Erasmus destination. The presence of "Erasmus family" atmosphere offers a possibility of using the personal testimonies of the past Erasmus students in marketing approaches, like social network campaigns, etc. Also, the word of mouth advertising can be a powerful tool, and it can work even without further initiatives from the home university.

The **weaknesses** have both of the institutional aspects of the university and personal, even psychological issues of students. First, the difficulty of credit transfer, which comes from the incompatibility of curricula of the institutions and the inflexibility of curricula and administration. Second, the relatively big costs for tuition-fee paying students who go on an Erasmus semester. This point is connected with the possibility of extending the study with studying abroad. Therefore the additional semester would cause extra pay.

The application numbers for Erasmus were significantly higher before 2014 when most students of the Faculty of Business and Economics, University of Pannonia were on state-funded studies without having to pay a tuition fee. Third, the strong competition of Campus Mundi, which student mobility programme was launched in 2016 by the Hungarian government. This programme attracts many students from the same student pool as the Erasmus is recruiting. Campus Mundi have similar conditions to Erasmus, and its big advantage is that the destination is not restricted; students may apply for an abroad semester anywhere in the world. Fourth, a part of the students find it difficult to leave their family and friends behind even for some months. This psychological discouragement might come from the characteristics of the Z generation.

The **threats** were derived from the weaknesses, and they are all connected with a possible decline in the interests of the students going to Erasmus, and consequently with decreasing numbers of participants of the Erasmus programme. First, a threat is the possibility of the decline in the number of outgoing Erasmus students due to the risk of prolonging the studies. In the age of new possibilities for students to travel even in their free time, this might be another factor why they decide not to go on Erasmus, finish their

study in time and travel afterwards. Second, because tuition-fee paying students have to pay the tuition even if they are on Erasmus can also limit the interest of these students to go on Erasmus. Third, in Hungary, there is an international mobility program Campus Mundi, which attracts many students, which is limiting the using of the Erasmus program. While from the perspective of international students mobility, in general, it might not be the problem, it can cause a problem for the administration of the Erasmus program. The program has certain characteristics and indicators which need to be fulfilled. Not fulfilling the project aims and indicators can threaten the future possibilities of using this mobility program. Fourth, with changes in the behaviour of the younger generation, the reluctance of leaving family and friends might play a stronger role than before.

Second, a SWOT analysis of the College of Polytechnics Jihlava.

Table 4. The SWOT analysis of the College of Polytechnics Jihlava

Strengths	**Weaknesses**
Small-town (and HEI) environment Safe destination Many Erasmus possibilities Good offer to be communicated	Risk of prolonging the study Personal reasons and fears Rise of another possibility for travel Lack of accommodation
Opportunities	**Threats**
Marketing approaches focusing on the advantages of a small-town environment Marketing approaches focusing on the advantages of a safe environment Attracting students with many possibilities for them to go Finding the marketing approach of delivering the offer to the students	Home students might get discouraged by the risk of prolonging the study Possible decrease of interest in the millennial generation Limited interest of home students going abroad due to the many other opportunities to travel Foreign students might get discouraged by accommodation troubles

Regarding **strengths**, the first and second ones are connected to the small-town atmosphere, similarly as in the first case. With 50,000 inhabitants, Jihlava has the approximately same population like Veszprém. In the relatively small HEI such us College of Polytechnics Jihlava, the students can encounter more individual service, including their assistance in finding a mobility program abroad, which represent the first strength. Second, similarly to the first case, Jihlava is a relatively safe destination regarding global threats such us international terrorism (see Dostál et al., 2018), but also in case of natural disasters. Both these strengths are certainly appealing for some students, so as some of the parents. Third, the College offers a variety of partner institutions the students can go

for the Erasmus+ programme. This means that the students have relatively many possibilities to combine their country preferences and field of study focus. While there is relatively small demand from the home students of going abroad to Erasmus, there is also a relatively high chance to succeed. Fourth, due to the administration and financial assistance of the college, in the combination of the high variety of partner HEIs abroad, and the positive attitude of most of the academics, it is a good value to be offered for home students.

Similarly, as in the first case, we derived the **opportunities** from the strengths. As in the previous case, they are focused on the marketing approaches using the strengths of the College in the perspective of Erasmus+ mobility. First, marketing approaches focusing on the advantages of a small-town environment, which might attract more international students. Similarly, the second, marketing approaches focusing on the advantages of a safe environment, while Jihlava is a relatively safe city. Third, addressing home students with a lot of possibilities for them to go for a study period abroad. Here is the question which marketing tools should be used for this cause, which is connected with the fourth point with finding the marketing approach of delivering the offer to the students. As it was stated during the interview, the International department feels that they can work with students' worries and uncertainties, while most of them can be dealt with. However, the students need to come and share that with them, so here is the possibly biggest opportunity in seeking the ways to attract the attention even of those of home students, who have some worries and uncertainties about going abroad.

We have identified four **weaknesses**. While the first and second ones were similar as in the case of the University of Pannonia, the third and fourth ones were specific for the University of Pannonia. The first weakness was the risk of prolonging the study, which might discourage some of the students from applying for the Erasmus+ programme abroad. The second point was connected with the specifics of the millennial generation and their personal fears. One example of this is a certain hesitation of leaving the "family nest". While for some the Erasmus opportunity might the desirable way apart from this lifestyle, for many students, it might be scary to be on their own for the whole semester or two. The other personnel fears might be that their English is not sufficient to study abroad, and also fear of the unknown, including security threats such as international terrorism.

Also, the third weakness is connected to changes in society, including technological change. The generation of the recent high school graduates has significantly more possibilities to travel than the generation 10 or even 20 years ago. Travelling abroad is easier than ever, and for international students, mobility program is increasingly harder to compete that. The fourth weakness is specific for the College, while there is a lack of accommodation for international students coming on Erasmus+. While the International

department offers assistance in finding private accommodation, it might be seen as discouraging factors by some of the international students.

Similarly, as in the previous case, we have derived the **threats** from the weaknesses. First, the home students might get discouraged by the risk of prolonging the study. Especially in combination with the fact that young people can travel easier than before, even in their free time and after finishing the study in time. Therefore, this threat can lead to the further decline of the students going on Erasmus+ abroad, or limit the possible growth in the future. Second, the international student mobility programs would eventually need to adapt to preferences changes of young people in a millennial generation. There is a possibility that the present offer and marketing approach would not be suitable for this generation, which would result in a minimal number of students being interested in going to study abroad. Third, due to the many other opportunities of young people to travel, this might represent the further diminishing trend of home students' interest in going to study abroad. Fourth, some of the international students might get discouraged by accommodation troubles if they had a bad experience.

5.1. Summary of the SWOT analyses

In this section, we divided the results of SWOT analyses in the two parts: 1) items the both HEIs have and common and 2) items which were perceived just by one HEI. Both two HEIs see their strengths in the small town or small HEI environment. In both HEIs are also opportunities for further marketing growth regarding promotion. Regarding weaknesses, both HEIs are dealing with the fear of the students of prolonging of study, and a certain hesitancy of students to leave their families. Concerning the threats, there are possible limiting factors of outgoing students mobility for both HEIs connected with the uncertainties of the students about possible prolonging of the study and hesitancy to leave their close ones.

The respondents also mention things that were unique for their organisation. For the University of Pannonia, it was the strength of Erasmus family, and subsequent opportunity for promotion of friendly atmosphere among Erasmus students, including the word of mouth advertising. The College of Polytechnics Jihlava stated two unique strengths, many Erasmus possibilities for the home students and relatively good offer for the students to be communicated. These strengths result in possible opportunities in attracting students with many possibilities for them to go and in finding the marketing approach of delivering the offer to the students.

Regarding weaknesses, University of Pannonia stated relatively significant costs for tuition-fee students of going on Erasmus and intense competition of Campus Mundi. These

weaknesses resulted in the possible threats of the reluctance of tuition-fee paying students are reluctant to use ERASMUS+ and the underuse of Erasmus+ program due to the competition of Campus Mundi. The College of Polytechnics Jihlava perceived these weaknesses: the rise of other travelling possibilities for young people and lack of accommodation for international students. These weaknesses can results in following threats: the limited interest of home students going abroad due to the many other opportunities to travel and discouragement of international students to come to the College due to the accommodation troubles.

The analysis provides a theoretical starting point to formulate a proper and working strategy for developing the Erasmus student mobility at an institutional level. The analysis puts in light all internal and external factors and all beneficial and harmful factors affecting the student mobility activity.

6. Conclusion

The attributes mentioned above of the HEIs in the periphery generally result in low numbers of international student mobility both on the incoming and outgoing side. However, with a well-designed strategy, the volume of student mobility may be increased. To form such a strategy, it is essential for institutional leaders to know the characteristics of potentially mobile students. As our data shows, the HEIs in the periphery matter both in Hungary and the Czech Republic. The international students' mobility on the periphery HEIs is, therefore, a topic that is worth the researchers' and practitioners' attention, since it can differ in certain aspect from the big cities. Small town and small HEI environment can be appealing for certain students (and parents), especially in the area of fear from international terrorism and refugee crisis etc.

In general, HEIs are facing challenges in the two areas of growth: first, Institutional growth, where is a problem of compatibility of the credit and curricula systems. This is merely about the communication of HEIs and further growth in processes of acknowledging the credits the student earned abroad. The other point in institutional growth is certain flexibility of the system; enable students going to Erasmus to do not have unnecessary obstacles in finishing their home study. It may involve individual study plans, and other study conditions to avoid the prolonging the study length for students going to Erasmus. The last point of the institutional growth is Erasmus friendly environment, which means that the HEI, their executives, so as the academics and other staff will see the benefits of international students mobility and reflect it in their professional life. In that way, they might encourage students to study abroad even unintentionally or accidentally by their behaviour, working methods or experience. Also, it should encourage the flexibility system.

While most of HEIs probably make progress in institutional growth, the numbers of students going for Erasmus abroad keep stagnating. There are many reasons for that, one of them probably is that students have in general much more possibilities to travel in their free time (without any further requirements), so from this perspective going abroad on Erasmus is not so unique. That is why the growth in the area of marketing and more specifically, promotion attract more and more attention. The HEIs are searching for appropriate marketing tools and approaches for the changing environment. While many of the HEIs have economic or marketing department or faculty, this might be a way how to cooperate on this. Also, regarding outgoing students on Erasmus, the HEIs are not competitors, but natural partners. A joint research project of Central and Eastern European HEIs regarding their marketing approaches how to promote an outgoing international students mobility might be a step in the right direction.

References

Benneworth (ed.) (2018): Universities and regional economic development: Engaging with the Periphery, Routledge.

Bologna Process (2010): Budapest-Vienna declaration on the European higher education area, Bologna Ministerial Anniversary Conference, Budapest and Vienna, 12 March 2010.

Bologna Process (2015): Yerevan Communiqué, EHEA Ministerial Conference Yerevan, 14-15 May, 2015.

Bologna Process (2018): Paris Communiqué, EHEA Ministerial Conference Paris, 25 May, 2018.

Czech Statistical Office (2018) Retrieved November 14, 2018, from: http://www.msmt.cz/vzdelavani/vysoke-skolstvi/prehled-vysokych-skol-v-cr-3

European Commission (2016): Erasmus+ Annual Report (2016).

European Higher Education Area (2011): Mobility for Better Learning. Mobility Strategy 2020. 24 August 2011.

Dostál, J., Chalupová, M., Černá, M., & Prokop, M. (2018): International terrorism as a threat to student mobility, On the Horizon, 26(2).

European Commission (2018) Erasmus+ Guide, Brussels.

Gacel-Ávila, J. (2005): The internationalisation of higher education: A paradigm for global citizenry, Journal of studies in international education, 9(2), 121-136.

Huják, J. (2015a): The real benefit of an exchange programme: Moving from credit mobility to degree mobility. Iin József Berács, Julia Iwinska, Gergely Kovács, Liviu Matei (eds.) CIHES Working Paper No. 12. 1st Central European Higher Education Cooperation (CEHEC) Conference Proceedings, Budapest, July 2015.

Huják, J. (2015b): Study Abroad Programs as Tools of Internationalization: Which Factors Influence Hungarian Business Students to Participate?, Journal of Teaching in International Business, 26(1), pp. 56-76.

Chalupová, M., Černá, M., & Prokop, M. (2016). International Business Weeks–From Challenge to Opportunity. Journal on Efficiency and Responsibility in Education and Science, 9(2), 31-36.

Klemencic, M. (2015): Internationalisation of higher education in peripheries: The "gear effect" of integrated international engagements, Internationalisation of Higher Education, 3(1), pp.1-17.

Knight, J. (2003): Updating the definition of internationalization, International Higher Education, 33(6), pp. 2-3.

Kohoutek, J., Pinheiro, R., Čábelková, I. et al. (2017): Higher Education Policy 30: 405. https://doi.org/10.1057/s41307-017-0062-8

Ministry of Education, Youth and Sports of the Czech Republic (2018), Retrieved November 14, 2018, from: http://www.msmt.cz/vzdelavani/vysoke-skolstvi/prehled-vysokych-skol-v-cr-3

Teichler U., Ferencz I., Wächter, B. (2011): Mapping mobility in European higher education I-II. DAAD, Bonn.

Verbik, L., & Lasanowski, V. (2007): International student mobility: Patterns and trends, World Education News and Reviews, 20(10), 1-16.

Appendices

Appendix 1. The volume of Erasmus+ student mobility and traineeship (No. of students)

Country	Sending	Receiving	S/R	Ratio S/R
Austria	6,939	7,352	R	0,94
Belgium	8,955	11,010	R	0,81
Bulgaria	2,373	1,155	S	2,05
Croatia	1,703	1,804	R	0,94
Cyprus	747	1,000	R	0,75
Czech Republic	8,015	9,286	R	0,86
Denmark	4,215	5,568	R	0,76
Estonia	1,137	1,652	R	0,69
Finland	5,902	8,018	R	0,74
France	40,910	29,068	S	1,41
FYROM	209	77	S	2,71
Germany	40,089	33,346	S	1,20
Greece	5,017	4,059	S	1,24
Hungary	4,135	5,707	R	0,72
Iceland	327	808	R	0,40
Ireland	3,172	7,614	R	0,42
Italy	34,343	22,785	S	1,51
Latvia	2,079	1,589	S	1,31
Liechtenstein	40	64	R	0,63
Lithuania	4,358	2,717	S	1,60
Luxembourg	563	914	R	0,62
Malta	362	2,215	R	0,16
Netherlands	13,083	12,771	S	1,02
Norway	2,105	6,206	R	0,34
Poland	16,518	14,616	S	1,13
Portugal	8,647	12,662	R	0,68
Romania	6,758	2,827	S	2,39
Slovakia	3,824	1,867	S	2,05
Slovenia	2,084	2,465	R	0,85
Spain	39,445	44,596	R	0,88
Sweden	4,092	10,050	R	0,41
Turkey	16,089	6,945	S	2,32
United Kingdom	15,645	31,067	R	0,50

Own compilation based on data from Erasmus Annual Report 2016.

Appendix 2. The volume of outward Erasmus+ student mobility (No. of students) by destination country

	Czech Republic	Hungary	Ratio of all CZ	Ratio of all HU
Total	8,015	4,135	100%	100%
Austria	475	254	5,93%	6,14%
Belgium	315	157	3,93%	3,80%
Bulgaria	51	6	0,64%	0,15%
Croatia	71	31	0,89%	0,75%
Cyprus	35	39	0,44%	0,94%
Czech Republic	0	99	0,00%	2,39%
Denmark	140	53	1,75%	1,28%
Estonia	116	33	1,45%	0,80%
Finland	436	147	5,44%	3,56%
France	669	313	8,35%	7,57%
FYROM	1	1	0,01%	0,02%
Germany	1,170	844	14,60%	20,41%
Greece	171	70	2,13%	1,69%
Hungary	83	0	1,04%	0,00%
Iceland	37	11	0,46%	0,27%
Ireland	153	77	1,91%	1,86%
Italy	372	363	4,64%	8,78%
Latvia	64	11	0,80%	0,27%
Liechtenstein	8	1	0,10%	0,02%
Lithuania	117	15	1,46%	0,36%
Luxembourg	10	0	0,12%	0,00%
Malta	49	37	0,61%	0,89%
Netherlands	284	231	3,54%	5,59%
Norway	194	42	2,42%	1,02%
Poland	228	155	2,84%	3,75%
Portugal	526	187	6,56%	4,52%
Romania	24	96	0,30%	2,32%
Slovakia	122	30	1,52%	0,73%
Slovenia	244	27	3,04%	0,65%
Spain	767	365	9,57%	8,83%
Sweden	266	76	3,32%	1,84%
Turkey	201	85	2,51%	2,06%
United Kingdom	616	279	7,69%	6,75%

Own compilation based on Erasmus annual Report 2016.

Appendix 3. List of HEIs on the Periphery in the Czech Republic (in alphabetical order):

- Academia Rerum Civilium - Vysoká škola politických a společenských věd, s.r.o.
- Evropský polytechnický institut, s.r.o. - Kunovice (European Polytechnical Institute - Kunovice)
- Filmová akademie Miroslava Ondříčka v Písku, o.p.s.
- Jihočeská univerzita v Českých Budějovicích (The University of South Bohemia in České Budějovice)
- Slezská univerzita v Opavě (Silesian University in Opava)
- Soukromá vysoká škola ekonomická Znojmo, s.r.o.
- ŠKODA AUTO Vysoká škola o. p. s - Mladá Boleslav
- Technická univerzita v Liberci (Technical University of Liberec)
- Univerzita Hradec Králové (University of Hradec Králové)
- Univerzita Jana Evangelisty Purkyně v Ústí nad Labem (Jan Evangelista Purkyně University in Ústí nad Labem)
- Univerzita Palackého v Olomouci (Palacký University Olomouc)
- Univerzita Pardubice (University of Pardubice)
- Univerzita Tomáše Bati ve Zlíně (Tomas Bata University in Zlín)
- Vysoká škola evropských a regionálních studií, z. ú. - České Budějovice
- Vysoká škola logistiky, o.p.s. - Přerov
- **Vysoká škola polytechnická Jihlava (University of Polytechnics Jihlava)**
- Vysoká škola sociálně správní, z. ú.
- Vysoká škola technická a ekonomická v Českých Budějovicích
- Západomoravská vysoká škola Třebíč, o.p.s

Appendix 4. List of HEIs on the periphery in Hungary (in alphabetical order):

- Dunaújvárosi Egyetem (University of Dunaújváros)
- Edutus Egyetem (Edutus University)
- Eötvös József Főiskola (Eötvös József College)
- Eszterházy Károly Egyetem (Eszterházy Károly University)
- Gál Ferenc Főiskola (Gál Ferenc College)
- Kaposvári Egyetem (University of Kaposvár)
- Kodolányi János Egyetem (Kodolányi János University)
- Miskolci Egyetem (University of Miskolc)
- Neumann János Egyetem (John von Neumann University)

- Nyíregyházi Egyetem (University of Nyíregyháza)
- **Pannon Egyetem (University of Pannonia)**
- Soproni Egyetem (University of Sopron)
- Széchenyi István Egyetem (Széchenyi István University)
- Szent István Egyetem (Szent István University)
- Tomori Pál Főiskola (Tomori Pál College)

Appendix 5. The comparison of Erasmus+ and Campus Mundi programme

	Erasmus+	**Campus Mundi**
Operator	European Commission	Hungarian Government
Duration of study abroad	3-12 months	3-5 months
Way of application	Off-line in home institution	On-line
Application period	Once in each semester	Continuous applications
Destination country	EU members, Iceland, Liechtenstein, FYROM, Norway, Serbia, Turkey	Any, except for countries not recommended by the Hungarian Ministry of Foreign Affairs and Trade
Destination institutions	Erasmus+ partners	Any*
Level of studies	BSc, MSc, PhD	BSc, MSc, PhD
Amount of grant	420-520 €/months**	200-350,000 HUF/month (approx. 625-1,010 €/month)

* Destination institution can be chosen from the home institution's list of Erasmus+ and other student mobility partners OR any other institution.
** In 2018.
Own compilation based on data provided by Tempus Közalapítvány, www.tka.hu. Please note that the focus of comparison is the student mobility component of both programmes.

The Impact of Nation Brand on International Students in International Student Mobility

Anna MOLNÁRNÉ SÁLYI

Abstract

With the development of the global economy, country image is becoming a key factor in the decision-making process of the global consumer. The study aims at examining the relationship between higher education, country image, and the internalisation of higher education. Country image and the image of higher education institutes has become an important factor in students' decision-making process considering their future alma mater.

The use of country image to boost the national higher education sector is a relatively new phenomenon; thus, the field is not extensively researched. The presentation gives a short overview of the evolution of the country image, its roots in brand image and the role it has played in the endeavour of Central Eastern European states to reposition themselves after the transition era.

1. The significance of international student mobility

In the transforming higher education of the 21st-century knowledge-based economies and human capital play a vital role. It is in this environment that internationalisation has gained importance globally. Globalisation and the expansion of higher education can be regarded as the main catalysts of the process, while the most significant indicator of it is international student mobility. According to OECD data, more than 5 million students studying abroad as a result of steady growth in the past years and decades. The present paper examines the effect of country image on internationalisation in higher education.

Research into students' motivation in choosing their destination country as well as the impact of nation brand is still relatively scarce. The phenomenon and notion of nation brands itself is a relatively new one. Country image (which is not entirely synonymous with nation brand) can be defined as a generalised construct formed by economic, political, cultural, tourism-related and technology-related aspects – and other defining aspects - that mark a country (Roth, K. P. – Diamantopoulos, A. 2009). Based on this understanding the most widely accepted definition of country image is that it is a sum of all beliefs, ideas, and impressions that people associate with a given country (Herrero, A. et al. 2015). The concept where country image is purposefully built and marketed is a recent one, which was born in the Anglo-Saxon sphere; coined and first used by Simon Anholt in a 1998 article ('nation brand') (Anholt, S. 1998. 30). 'Nation brand' has different translations naturally, in Hungarian it refers to country image, not brand (brand as a phenomenon is much less embedded in Hungarian culture). Nation brand as a concept and as an economic potential is intertwined with globalisation – as a result of globalisation, ;destinations are more and more uniform.

Consequently, it has become more and more important for destinations to distinguish themselves in the eye of the consumer (may it be a tourist or a student in higher education) and do it with the help of simple, easily memorable visual and verbal codes. The term has been further refined to 'destination branding,' which conveys the idea of attracting tourists whereas 'nation branding' has become synonymous with a more complex task: increasing direct investment flow into a country. Anholt realised that successful brands originated from prosperous countries – presumably because of the positive image of a country influenced global consumers' choice. Challenges in creating an easily decodable, easily interpretable nation brand can be seen int he fact that nation branding campaigns tend to use the same catchphrases or cue words, such as 'friendly,' 'beautiful,' 'adventurous' or 'peaceful' (Sataoen 2015).

2. Nation brand building in East-Central Europe

The endeavour of East-Central European states to build a recognisable nation brand has been similar in many ways (Szondi 2007). The transition period from Communism to democracy made it evident that nation branding was especially crucial for these states. Nation branding agencies came to existence around 2000, almost simultaneously with the concept being born. Very often it was in the form of national tourism agencies. Hungary was one of the first countries where this process started, with the creation of the so-called Country Image Centre in 2000. The first such initiative was launched in Poland also in 2000

(attached to the Ministry of Foreign Affairs). In the case of East-Central European countries nation brand building served various purposes, such as distancing themselves from their communist past, communicate the ongoing transition (in part to their fellow countrymen), prove that these states are trustworthy members of the international community (on which they largely depended for financial aid among others) and to steer the country from the periphery to the centre. As country branding requires a more thorough strategy, one that unfolds over a much more extended period of time, East-Central European countries preferred destination branding over country branding. Nation branding campaigns are targeted and are characterised by strong visuals, symbols (usually in the form of a logo) and a short, easily memorable slogan. Hungary's strategy in successive campaigns was marked by a tendency to rely on 'human resources' of the country rather its natural wonders (which was more typical in the region). In 2005 accordingly, the „talent for entertaining" slogan was incorporated in the nation brand campaign. This choice was based on research which posited that foreigners associate Hungary most often with talented people and hospitality. Poland chose „creative tension" as a slogan, referring to the fact that the country is two-faced in many ways but that this only enhances its touristic values. The most memorable nation branding initiative also came from Poland in 2005; they chose to advertise the Polish plumber as a ravishing young man in response to a negative campaign warning French citizens of the dangers of Easter Europeans joining the EU.

In general, it can be stated that destination branding oriented campaigns have mainly been successful in the East-Central European region. Tourism is a growing industry in this group of countries. The Visegrad group of countries have launched joint campaigns too, a unique phenomenon in the region. Nation branding initiatives, on the whole, have been less successful. In this case, the desired outcome would be if a 'made in Hungary' or 'made in Poland,' label carried the same weight for the global consumer as it does in the case of 'made in France'; 'made in Italy' or 'made in Germany.' (Hungary has already taken steps in this direction with the establishment of the 'Hungaricums,' products which are characteristic and uniquely representative of Hungary). This seems a difficult objective to reach at the moment, but it can be asserted that the first country in the region to accomplish it can be regarded as the winner of this race (so to speak). There have been obvious difficulties in the course of these endeavours, such as political ones (e.g, campaigns being too attached to individual governments), a lack of coordination between actors as well as the use of clichés or quickly outdated elements. Nation branding campaigns are no miracle workers. They only achieve their desired effect in the presence of specific (infrastructural, economic) circumstances. Also, it is important to stress that East-Central European nations were not isolated in their efforts to position themselves more favourably on the international market; countries which are among the world's most developed (such as Norway or Denmark) allocate substantial funds for this end too. (Szondi 2007).

3. Higher education and nation branding

The relationship between higher education and nation branding involves many components and notions, such as cultural diplomacy and competitive identity (Sataoen 2015). The decision-making process of international students is composed of three steps (Mazzarol, T. – Soutar, G. N. 2002). First, they have to decide that they want to study abroad instead of staying at home. Second, they choose the destination country (influenced by their perceptions about the social, economic, and cultural characteristics of that place). Third, they choose a higher education institute in their preferred country, based on criteria such as prestige, quality of education reputation of degree(s) obtainable as well as tuition fees. The role the perception of the destination country plays in the decision-making process is not well researched. It can be asserted; however, that nation brands act in a net-like way: if the consumer is not familiar with the product he/she draws on his/her experiences with the country (the product was made in), if he/she is not familiar with the country then he/she projects the quality of the product onto the country. This mechanism is also present in the case of higher education institutes. Higher education can be regarded as a high added value product, one that is more and more open to the global market, while still being hard to define as a product. When nation branding as a phenomenon was born and described the realisation came with it that there is a possible link between higher education and nation brand. Consequently, positioning themselves as sellable products on the international market has become an important part of their strategies for higher education institutions (Stensaker 2007).

When examining this issue, certain factors are important to bear in mind – one is that higher education institutions have historically been part of countries' self-image (e.g., Oxford and Cambridge). This has been the case up until today: well-performing higher education institutions help countries distinguish in the global competition. The impact of globalisation on higher education is evident int he appearance of rankings of higher education institutions (Sataoen, 2015), as well as the introduction of market and competition based reforms in the field while political influence and action have been reduced (Ferlie, Musselin, & Andresani, 2008). A new, global higher educational set of norms are being formed, and higher education institutions have to conform if they are to succeed in this new era (Paradeise & Thoenig 2013). For that reason, self-branding has become a need also in higher education, just like in the case of countries, even though this is a more challenging task due to institutional complexity (and both are significantly more difficult than branding a traditional product). At the same time, brand building in higher education faces the same problems as brand building in the case of a country: the 'product' should be both similar to and distinguishable from others. The connection between nation brand and higher education brand (so to speak) is a relatively new field of research.

Research has been undertaken in various directions, including internal dynamics (Waeraas and Solbakk 2009), leadership and branding (Naidoo et al. 2014) or achieving successful HE brands (Chapleo 2010). However, little work has been done on higher education as a national brand, not even in the context of the most important countries in the field, the UK, and the US. A 2017 global poll on international student mobility trends suggests that brand awareness is the key challenge facing universities in recruiting international students. Consequently, it might be asserted that for universities the most fruitful strategy is to focus on their own brand building opportunities, as nation brand building is a more complex and less certain route for higher education institutes in the field.

It is only the most well-known higher education institutes, such as Cambridge or Oxford in the cases of which the impact of their university brand might be demonstrated on the country brand (lesser-known higher education institutes, while still attract capital and human resources to their country, are much less likely to influence the country brand image). Higher education policies in this regard have also been researched in the United Kingdom (Hemsley-Brown, J.,& Goonawardana, S. 2007). The British state recognised the importance of branding in higher education and launched a campaign with the help of British Councils all over the world in the early 2000s with the aim of increasing foreign student numbers in British higher education. It has to be noted that there has been a significant backlash against viewing students as consumers (Hemsley-Brown, J., & Goonawardana, S. 2007); many have argued that the philosophy (and jargon) of the business world and that of higher education are incompatible. Nonetheless, a consensus emerged, claiming that higher education institutions need to form their brand building strategies (Parameswaran and Glowacka, 1995). Simultaneously, higher education has entered the so-called 'experience economy' a booming industry – it is a collective term for the way people increasingly spend their money – buying 'experiences.' This also prompts higher education actors to employ catchphrases and even clichés in their quest for a distinguihable brand This is amply demonstrated by endeavours of Norwegian and Swedish state higher education portals which strive to popularise their institutions; they use clischés associated with Norway and Sweden (Norway is marketed with being very 'equal,' Sweden with being 'well-organised and ultramodern') (Sataoen 2015).

Students staying in a given country later can become assets for the host countries; if they have positive experiences they can become 'ambassadors' for the country brand, or they might come to love a specific product of that country and seek that product when they return to their home country (this only happens if the host country has global brands). In addition, family and friends who visit might also familiarise themselves with the country as well as its products.

References

Anholt, Simon. (1998). Nation-brands of the twenty-first century. Journal of Brand Management. 5.(6) 10.1057/bm.1998.

Chapleo, C. (2010): What Defines "Successful University Brands?" International Journal of Public Sector Management 23 (2): 169–83.

Drori, G., Delemstri, G., & Oberg, A. (2013): Branding the university: Relational strategy of identity construction in a competitive field. In L. Engwall & P. Scott (Eds.) Trust in higher education institutions. London: Portland Press, pp. 134–147.

Ferlie, E., Musselin, C. & Andresani, G. (2008): The Steering of Higher Education Systems: A Public Management Perspective. Higher Education, 56(3), 325-348.

Hemsley-Brown, J. – Goonawardana, S. (2007): Brand Harmonization in the International Higher Education Market. Journal of Business Research, 60(9), 942-948.

Herrero, A., Gutierrez, H. S. M. & Garcia-Salmones M. d. M. (2016): Influence of country image on country brand equity: application to higher education services. International Marketing Review, 33(5), 691-710.

Mazzarol, T. – Soutar, G. N. (2002): "Push-pull" factors influencing international student destination choice. International Journal of Educational Management, 16(2), 82-90.

Naidoo, R., J. Gosling, R. Bolden, A.O'Brien, and B. Hawkins. 2014. "Leadership and Branding in Business Schools: A Bourdieusian analysis." Higher Education Research and Development 33 (1): 144–56.

Paradeise, C. – Thoenig, J. C. (2013): Academic Institutions in Search of Quality: Local Orders and Global Standards. Organization Studies, 34(2), 189-218.

Parameswaran, R. – Glowacka, A.E. (1995): University image: An information processing perspective. Journal of Marketing for Higher Education, 6, 41-56.

Roth, K. P. – Diamantopoulos, A. (2009): Advancing the country image construct. Journal of Business Research, 62(7), 726-740. https://www.sciencedirect.com/science/article/abs/pii/S0148296308001586

Sataoen, H. L. (2015): Higher education as object for corporate and nation branding: between equality and flagships. Journal of Higher Education Policy and Management, 3, 702-717. https://www.tandfonline.com/doi/full/10.1080/1360080X.2015.1102822

Stensaker, B. (2007): The Relationship between Branding and Organisational Change. Higher Education Management and Policy, 19(1), 1-18.

Szondi, Gy. (2007): The role and challenges of country branding in transition countries: The Central and Eastern European experience. Place Branding and Public Diplomacy, 3(1), 8-20. https://link.springer.com/article/10.1057/palgrave.pb.6000044

Wæraas, A., and M. N. Solbakk. 2009. "Defining the Essence of a University: Lessons from Higher Education Branding." Higher education 57 (4): 449–62.

What do international students think after they finished their education in Hungary? Post-studies research with students from the field of economics

Anita KÉRI, Balázs RÉVÉSZ

Abstract

Internationalization is considered to be one of the most crucial trends in higher education nowadays. International students have become the center of attention due to their key importance in this process. However, little has been known about the post-studies phase of studying abroad. This paper uncovers students' experience while studying abroad from the retrospect. The research aims to collect useful feedback from students to develop the international program of the faculty. In-depth interviews and an online survey were conducted with students who had just finished their studies at the University of Szeged, Faculty of Economics and Business Administration. The investigation revealed that students' prior knowledge of the preferred country and city of stay is inevitable, and their primary information source is the internet. Results show that students mostly get what they expected. Moreover, they provided suggestions for development, which also further our knowledge about the study-abroad process of students. The current findings might be useful for the future initiatives of higher education in Hungary.

1. Introduction

The number of international students is on the rise in Hungary as well. This trend is due to the excellence and attractiveness of Hungarian HEIs. Moreover, the Hungarian Stipendium Hungaricum scholarship program also accounts for the continuously growing number of

international students, as it is an excellent opportunity for them to come to Hungary to study. Therefore, there is a need for Hungarian universities to provide competitive higher education for both domestic and international students.

The policy of the University of Szeged has been concentrating on internationalization for the past decades. The first international program started more than 30 years ago at the Faculty of Medicine, and since then, other faculties have successfully launched and maintained their international education. In the current research, the international program of the Faculty of Economics and Business Administration is investigated with special emphasis on students' opinion after finishing their studies at the faculty.

The international program at the Faculty of Economics and Business Administration is quite young, as it started in the academic year of 2013 and 2014. Since then, the overall number of international students is rising year by year (Table 1). Therefore, it is essential to investigate what these students think, what feedback they can provide for the faculty so that it can develop its services provided for these students.

Table 1 The number of international students at the Faculty of Economics and Business Administration

Academic year	Bachelors	Masters	PhD
2013/2014	16	-	-
2014/2015	24	-	-
2015/2016	22	6	-
2016/2017	28	6	2
2017/2018	48	23	3
2018/2019	32	41	5

Source: Own research (2018)

In the academic year of 2017/2018, the faculty started to implement a satisfaction measurement framework for international students. This framework is comprised of entry and exit studies of international students. In the current paper, the importance and results of the first exit interviews and survey are summarized, and further development strategies and steps are proposed for the faculty.

The paper reviews the secondary literature on satisfaction and loyalty; then it introduces the student satisfaction measurement framework and the results of the exit interviews and survey of the academic year of 2017/2018.

2. Literature review

Higher education is a unique service, where the client is also involved in the processes and takes a very active part in the realisation of the service. Canterbury (1999) quotes an argument stated at the higher education symposium of the American Marketing Association (Shanks et. al, 1993) saying that higher education possesses the essential traits of services in that it is heterogeneous, has no physical form, cannot be stored, and in that the provision of the service cannot be separated from receiving it. Based on this, we have to approach the topic of international student satisfaction and loyalty from the services' viewpoint.

2.1. Satisfaction with international higher education

Consumer satisfaction is a central concept in marketing, and it is of high importance for most of the companies and institutions since satisfaction is a key to consumer welfare and company success (Oliver, 2015). Many scientific articles have addressed the topic of consumer satisfaction. One of the earliest to be mentioned is the research conducted by Cardozo (1965) who identified two main factors that affect satisfaction: consumer efforts and expectations can affect the evaluation of both a product and a buying experience. Building on this theory, Churchill and Surprenant (1982) identifies satisfaction as the result of buying and consumption, where satisfaction is based on the consumers' cost and profit comparison. Similarly to this, Tse and Wilton (1988) define consumer satisfaction as the difference between the expected and perceived product performance. Yi (1990) differentiates between two streams of research. Part of the articles defines satisfaction as a process (perceptual, evaluative, and psychological processes), while other research considers satisfaction as an outcome, as the result of an evaluation.

The reputation of a higher educational institution is based on its students' satisfaction. Therefore, student satisfaction is one of the most frequently measured concepts in higher education. Many kinds of research build upon the disconfirmation theory. Most of these researches compare expectations and experience to measure satisfaction. In other words, they compare the expectations towards studying abroad, and the perceived quality of the study period in a foreign country (Browne et al., 1998, Yi, 1990, Yousapronpaiboon, 2014, Chui et al., 2016).

A large number of factors have been introduced in the literature that affects student satisfaction in higher education. The factors can be divided into two categories: factors that are related to the university and teaching, and factors that are experienced outside of the institution.

Based on the literature, we can state that satisfaction with education and with factors that are strongly related to the university is very important. But analysing foreign students' satisfaction is even more complicated than that. The satisfaction of the international students' relies not solely on university-related aspects, but aspects related to out-of-school factors as well. International students do not only study at a new university, but they become members of a new community and a new culture. Therefore, their way of living and social life options also add or take from the level of their satisfaction. (In table 2 and 3, the most commonly used constructs are listed with examples of references.)

Table 2: Factors related to university and teaching

Factors	**References**
ability to react	Ahmed, Masud 2014
communication	Douglas, Davies, 2008; Sultan, Wong 2013
competencies	Ahmed, Masud 2014
equipment	Butt, Rehman 2010
expectations	Østergaard, Kristensen, 2005; Alves, Raposo, 2009; Zhang et al. 2008; Pinto et al. 2013; Shahsavar, Sudzina 2017
expertise of educators	Butt, Rehman 2010
image/reputation of university	Østergaard, Kristensen, 2005; Alves, Raposo, 2009; Zhang et al. 2008; Brown, Mazzarol 2009; Pinto et al. 2013; Temizer, Turkylimaz 2012; Shahsavar, Sudzina 2017
infrastructure	Butt, Rehman 2010; Chui et al., 2016
perceived quality	Østergaard, Kristensen, 2005; Alves, Raposo, 2009; Zhang et al. 2008; Temizer, Turkylimaz 2012; Shahsavar, Sudzina 2017; Dona-Toledo et al. 2017
perceived value	Østergaard, Kristensen, 2005; Zhang et al. 2008; Temizer, Turkylimaz 2012; Pinto et al. 2013; Shahsavar, Sudzina 2017
student support	Savitha, Padmaja 2017
students' activities	Zhang et al. 2008
training programmes	Jager, Gbadamosi 2013; Wiers-Jenssen et al. 2002
trust towards university management	Jager, Gbadamosi 2013; Chui et al, 2016
willingness to develop	Jager, Gbadamosi 2013
willingness to intermit studies	Jager, Gbadamosi 2013
word of mouth	Sultan, Wong 2013

Source: own construct

Table 3: Factors that are experienced outside of the institution

Factors	**References**
accommodation and study environment	Evans 1972
availability of out of school services	Aldemir, Gülcan 2004
culture	Randheer, 2015; Tsiligiris, 2011
financial circumstances	Schertzer, Schertzer 2004
location	Jager, Gbadamosi 2013; Wiers-Jenssen et al. 2002
social life	Evans 1972; Schertzer, Schertzer 2004; Billup, 2008; Hetesi, Kürtösi 2008;

Source: own construct

To measure student satisfaction, we can use quantitative and qualitative approaches as well. The SERVQUAL model is one of the most widely known and used method for measuring services quality (Parasuraman et al., 1991). Applied for higher education, SERVQUAL measures the physical elements, trustworthiness, reactions, competencies and empathy (Browne et al., 1998, Yousapronpaiboon, 2014, Chui et al., 2016). The SERVPERF method was also introduced in higher education research (Negricea et al., 2014) and based on the experiences, the HedPERF method was developed by Abdullah (2006). Randheer (2015) developed it even further and introduced a CUL-HedPERF scale that involved the measurement of cultural aspects as well. Tsiligiris (2011) considered culture as an important aspect of student satisfaction and developed the EDUQUAL method to make SERVQUAL more effective. Noaman et al. (2013) developed another higher education oriented adaptation of the SERVQUAL method, which is HEQUAM.

Customer Satisfaction Index models were also adopted in the field of higher education (Østergaard, Kristensen, 2005, Alves, Raposo. 2009, Brown, Mazzarol, 2009, Pinto et al., 2013, Eurico et al., 2015, Savitha, Padmaja 2017). However, Sultan and Wong (2010) argued that instead of using solely quantitative methods, researchers should use qualitative methods in advance of quantitative research. Mostly in-depth interviews (Patterson et al., 1998) and focus group interviews (Sultan, Wong, 2013, Gallarza et al., 2017, Winke, 2017) were used.

2.2. Loyalty in international higher education

Loyalty is closely related to satisfaction, since in some cases, satisfaction might be an indicator of loyalty, and as Reichheld (2000, 2003) stated, satisfaction is one of the key factors of development, but not always enough to keep customers on a long turn (Reichheld et al., 2000) and not always enough to make customers loyal.

Loyalty is a frequently researched topic not only in the business world but also on non-profit markets. A wide number of research dealt with the topic of loyalty in the field of higher education too. In most cases, the researchers define and measure loyalty as a factor related directly to the institution. Carvalho and Mota (2010) define loyalty as a relationship between the students and the university that is based on trust. On the other hand, Schertzer and Schertzer (2004) - who measured higher education dropout - stated that the more satisfied a student is with the university, the more likely they feel committed to it, and the less likely they drop out from school.

Only a few research measure loyalty as a broader concept. However, especially in the case of international students, loyalty might not only be related to the university, but students might also be loyal to their professors, the town, the culture, their friends, and the leisure activities as well. In their research, Giner and Rillo (2016) define student loyalty as a long-lasting phenomenon, which still exists after the student has finished their studies.

According to Rojas-Méndez et al. (2009), loyalty involves an intention to behave (either repurchase or provide financial or non-financial support to one's alma mater), and its antecedents are perceived quality, satisfaction, trust and commitment.

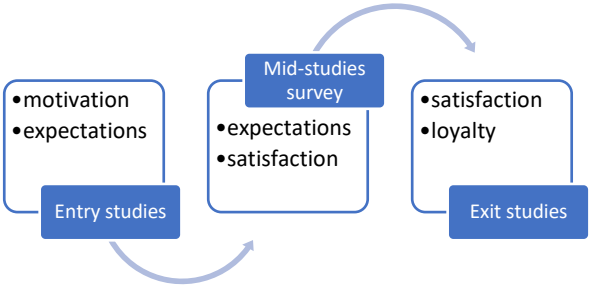
Mekic and Mekic (2016) go even further, as they measure student loyalty by the willingness for repurchase and recommendation. Repurchase and word of mouth (recommendation) is considered to be an important aspect in researches based on the customer index models (Østergaard, Kristensen, 2005, Alves, Raposo. 2009, Brown, Mazzarol, 2009, Pinto et al., 2013, Eurico et al., 2015, Turkyilmaz et al 2018).

However, no research was found, which is based on the complete experience of international students in a foreign country. In our research, we developed a framework, in which the out-of-school factors are also considered when analysing student loyalty and satisfaction.

3. Primary research

The implementation of a student satisfaction measurement framework started in the academic year of 2017. Entry studies are made with students who enter the faculty and the topic is their expectations, while exit studies are conducted with those who finish their studies in the given academic year, and the topic is their satisfaction and potential loyalty. In the middle of the international students' study program, their expectations and satisfaction are asked again to see if there were any changes compared to the initially obtained expectations. Figure 2 demonstrates the framework and its characteristics.

Figure 2 Evaluation of the questionnaire's scale items related to the faculty



Source: own study

The first exit studies at the faculty were conducted in June 2018, and its results are introduced in the primary research. The exit studies aimed to get to know international students' post-study impressions about studying in Szeged, Hungary and at the University of Szeged, Faculty of Economics and Business Administration. It was also its aim to propose practical recommendations the faculty would be able to implement.

3.1. Methodology

The primary research included an online questionnaire and in-depth interviews. Both were conducted in June 2018 with students who finished their studies at the faculty prior to the interviews and the survey.

Regarding the online questionnaire, the population size was relatively small due to the novelty of the program. The population included 18 international students, out of which

11 people filled in the questionnaire. 9 master's and 2 bachelor's students participated in the questionnaire, which was composed of 5-point Likert-scale and open-ended questions.

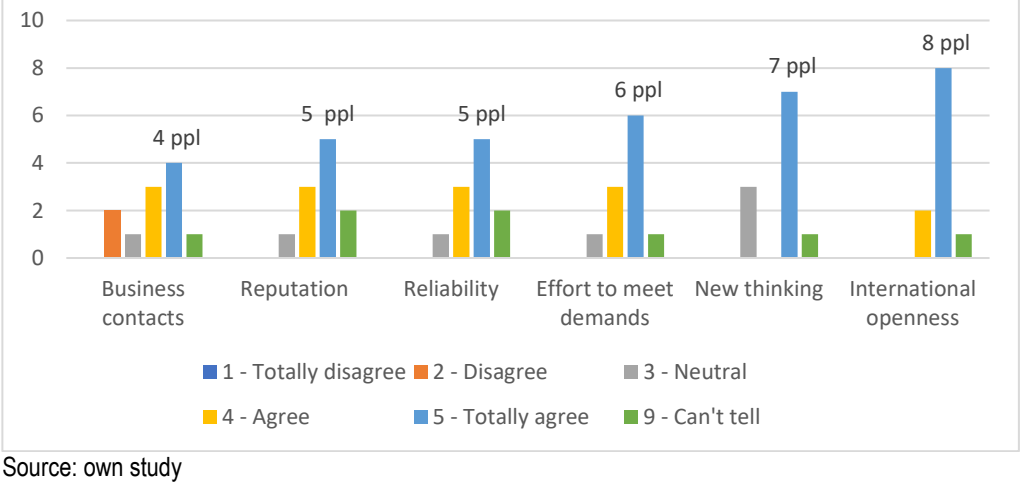
During the qualitative study, four students were interviewed, three master's and one bachelor's student from Tunis, Italy, Ecuador and Mexico. During the interviews, students were asked whether their expectations of studying in Hungary and at the faculty were met or not and if they were satisfied or not. They also had the opportunity to determine the strengths and weaknesses of the faculty and provide practical recommendations regarding future development.

3.2. Quantitative research results

As the quantitative research is limited due to the number of the participants and the size of the population, the results of the questionnaire are introduced briefly, and in the next sub-chapter, particular emphasis is put on the qualitative results of the in-depth interviews.

The questionnaire included Likert-scale items regarding the faculty's reputation, its international environment, established contacts with businesses, its reliability, trustworthiness and its willingness to be the place of new thinking and to make efforts to meet students' needs. As the number of answers from the participants does not allow us to do in-depth statistical analysis, the single answers of the 5-point Likert-scale items are compared (Figure 2).

Figure 2 Evaluation of the questionnaire's scale items related to the faculty



Source: own study

If we look at the results, we can conclude that the overall satisfaction regarding all the items is above an average 3 in all cases. However, it can also be seen that what students agree with the most is that the faculty is internationally open and what they disagree with the most is that the faculty does not have established close contacts with businesses.

In the questionnaire, open-ended questions were asked. Only some of the participants answered these questions, but the results are consistent with that of the scale items (Table 2). When asked what three words come into their minds regarding the faculty, students say it is an internationally open faculty, and they only think of positive words.

Table 2 The first three words that come into the minds of international students about the faculty

1	Professional teachers	Creative lessons	Nice environment
2	Math	Degree	Helpful
3	Open	**International**	Helpful
4	Organization	**Internationalization**	Quietness
5	**International** environment	Friends	Studies
6	Tranquil	Intensive theories	Good reputation
7	Well organized academic programs	Excellent staff	**Internationally** open Faculty
8	**International** students	Professional professors	Sophisticated equipment
9	Business	Communication	Relations
10	Equity	Progress	Qualified system

Source: Own research (2018)

Students were also asked what kind of students choose the faculty according to their opinion. As we can see the results in Table 3, they all contributed positive attributes to those students who choose the faculty. However, regarding the qualitative aspects, we can see a declining trend in the students' willingness to answer these open-ended questions.

Table 3 Students' answers for the open-ended question: "In my opinion, those people choose the University of Szeged, Faculty of Economics who are..."

1	very good choice and have very high standard of courses.
2	ambitious to learn more about economics.
3	trying to achieve the international level and experience different life.
4	students interested in Economics and internationalization.
5	find the best way to pursue their economic career.
6	eager to learn in a high-quality Faculty.
7	dedicated themselves as economists.
8	ready to face new challenges.

Source: Own research (2018)

At the end of the questionnaire, students were asked about their overall satisfaction on a 5-point Likert-scale. Their mean satisfaction value is 4.5, which is relatively high. Students were also asked if they would recommend studying at the faculty, and the mean of their answer is also relatively high 4.5. Moreover, if the next study program they would be interested in starting at the Faculty of Economics and Business Administration, 6 of the asked students would stay in Szeged.

3.3. Qualitative research results and practical recommendations

The in-depth interview results are analysed according to three criteria, that are strengths, weaknesses and loyalty towards the examined faculty. Students' ideas and thoughts are followed by practical recommendations.

One of the strongest features of the faculty is its international openness, as we could also see in the quantitative research. Students also believe that the city is perfect for studying, and it met most of their expectations.

> "I felt like in a community, where teachers know each student." (Student 2)

> "The city is very good for studying." (Student 3)

> "I was hoping to have a great time and actually it was better." (Student 4)

> „And then in terms of the education, honestly, it met my expectations." (Student 1)

However, there are certain weaknesses that students were able to mention. These weaknesses and ideas could be used for future development. The first issue being criticized was the content of the classes and courses.

> "All the courses were theoretical apart from one or two. And yeah, this was a disappointment for me." (Student 2)

> "In the practice I don't know how all these studies will all help me in a professional matter." (Student 3)

Students were missing more practical classes and the application of the good theoretical knowledge they learn. Therefore, in the future, the faculty should concentrate on implementing more and more practical classes, where students would be able to see how the theory can be applied in practice. Establishing even more contacts with businesses could be a solution to this problem. But on the other hand, the curriculum has to make sure that students are not overburdened with these potential collaborations.

The next weakness they mentioned is related to their identities.

> „I'd like to apply for jobs or for a master and I don't exactly know what am I? I am an economist, but what am I? Am I an accountant? Am I like a finance analyst or something?" (Student 1)

It is crucial for students to develop themselves and their identities. This feedback is essential, as now the faculty knows that some of the international students cannot exactly determine who they are, which is an enormous problem. A practical solution could be to start specializations after the first academic year. From the second year, students would be able to choose in which field they are most interested. Furthermore, the master's program should be extended, and a much broader portfolio of studies should be offered to international students.

Language barrier and separation from Hungarian students is also a problem, according to internationals.

> „For me, it's my third year in Hungary and I don't have a single Hungarian friend." (Student 1)

> "There is this pre-camp, when you are a freshman. I don't know if it is for masters or for bachelors, but I think that helps the students to get to know each other and are shouting that "egy csapat vagyunk" (Student 4).

This problem would not seem so huge at first sight, but integrating Hungarian students with internationals is a challenge we are facing. Firstly, the removal of language barrier should be dealt with, which might be a challenge due to the unwillingness of many Hungarian students to speak in English. Hungarian and international students are

integrated into the master's program, but the solution might be to organize events for both Bachelor and Master students.

The "boredom" of international students is a pressing issue, which is partly due to the language barriers between the local Hungarians and them.

> "People do not want to just sleep, wake up, have exams and etc. They have a lot of potential, they would even donate, they would do activities for hours. They just need this language barrier to be removed." (Student 1)

As they say, they are much more than just students here. They want to contribute to the local society, which should be valued and – most importantly – made possible. One way to do so would be to open up to local NGOs, as these students would be willing to help people in need.

> „If I am Azeri person, I would love to know that the people who studied here and went back to Azerbaijan, that was the degree actually recognized? Did it matter? Did what they studied theoretical part matter? Should I focus on specific subjects? That would really help nationwide as well." (Student 1)

It would also be a good idea to start the international alumni system of the faculty. This new system should include alumni brand ambassadors, who would be able to talk to their nationalities about their experience in Hungary, either in person or in the form of a blog.

Regarding students loyalty, they were asked if they would choose the faculty again, and if they would recommend it to others. Their answers can be seen in Table 4. Based on these responses, we can see that most of them would choose the faculty again, but the importance of the capital city of Budapest and its job market opportunities are quite appealing for international students. Even though students have mentioned certain weaknesses of studying in Szeged, most of them would or already had recommended it to others for its certain aspects.

Table 4 Students' willingness to choose again or recommend the faculty

	Choosing it again	Recommending it
Student 1	Only if it would be in Budapest.	Would rather recommend Budapest. Szeged is good if somebody wants to chill.
Student 2	Yes	Already recommended it. Friends to come to the Double Degree program.
Student 3	Yes	Already recommended it.
Student 4	Yes	Already recommended it.

Source: Own research (2018)

4. Conclusions

Due to the continuously growing number of international students in Hungary, there has been a clear need for the research of their satisfaction and loyalty. The satisfaction and loyalty of already graduated students are essential, as they might become potential advocates for the next generation and because HEIs can improve their services based on the valuable feedback of their students.

Additionally, it is most certainly not enough for a HEI to look at their international students' satisfaction only once, but a continuously conducted investigation is needed. These longitudinal studies would be able to provide more in-depth information on students' needs, the changes in their expectations, their satisfaction and loyalty.

Therefore, the faculty implemented an international student satisfaction measurement method, which investigates students' motivation, expectations, satisfaction and loyalty. Results of the exit studies show that both quantitative and qualitative studies are important in the field. The growing number of students makes it possible to obtain a higher and higher number of responses, while in-depth interviews provide researchers with extremely useful feedback and improvement ideas and possibilities.

The results of the current study show that students are mainly satisfied with studying at the examined faculty. In spite of the small number of the sample, the quantitative research revealed that students mostly agree with the fact that the faculty is an internationally open faculty, while they least agree with the fact that the faculty has well-established business contacts. The open-ended questions also demonstrate a clear view on what international students think of the faculty. They believe that it is an international and internationally open faculty. When students had to describe what characteristics students have who study at this faculty, they only enlisted positive attributes.

Moreover, the qualitative analysis also revealed that most of the interviewed students are satisfied with the faculty and would recommend it to other people, though they would warn them about the disadvantages. More interestingly, students see the situation of the faculty from a practical viewpoint, which enabled them to word current and useful recommendations for future development.

All in all, the authors believe that the satisfaction measurement framework can be considered an effective tool for measuring students' beliefs. However, it should be revised and updated each year based on previous years' results and feedback from students.

References

Abdullah, F. (2006): The development of HedPERF: a new measuring instrument of service quality for the higher education sector. International Journal of Consumer Studies. 30 (6), p. 569-581.

Ahmed, S. – Masud, M. M. (2014): Measuring service quality of a higher education institute towards student satisfaction. American Journal of Educational Research, 2(7): p. 447-455.

Aldemir, C. – Gülcan, Y. (2004): Student Satisfaction in Higher Education: A Turkish Case. Higher Education Management and Policy, OECD Publishing, 16(2), p. 109-122.

Alves, H. – Raposo, M. (2009): The measurement of the construct satisfaction in higher education. Service Industries Journal, 29(2), p. 203-218.

Brown, R. M. – Mazzarol, W. (2009): The importance of institutional image to student satisfaction and loyalty within higher education. Higher Education. 58, p. 81-95.

Browne, B.A. – Kaldenberg, D. O. – Browne W. G. – Brown, D. J. (1998): Student as Customer: Factors Affecting Satisfaction and Assessments of Institutional Quality, Journal of Marketing for Higher Education, 8:3, 1-14, DOI: 10.1300/J050v08n03_01

Butt, B. Z. – Rehman, K. (2010): A study examining the students satisfaction in higher education. Procedia – Social and Behavioral Sciences. 2, p. 5446-5450.

Cardozo, R. (1965): An Experimental Study of Customer Effort, Expectation, and Satisfaction. Journal of Marketing Research, 2(3), 244-249.

Carvalho, S. W. – Mota, M. O. (2010): The role of trust in creating value and student loyalty in relational exchanges between higher education institutions and their students. Journal of Marketing for Higher Education, 20(1), p. 145-165.

Chui, T. B. – Ahmad, M. S. – Bassim, F. A. – Zaimi, A. (2016): Evaluation of Service Quality of Private Higher Education using Service Improvement Matrix. Procedia – Social and Behavioral Sciences, 224, 132-140.

Churchill, G. A. – Surprenant, C. (1982): An investigation into the determinants of customer satisfaction. Journal of Marketing Research, 19, p. 491-504.
Doña-Toledo, L. – Luque-Martínez, T. – Barrio-García, S. (2017): Antecedents and consequences of university perceived value, according to graduates: The moderating role of Higher Education involvement, International Review on Public and Nonprofit Marketing, Vol. 14(4), p. 535-565.
Douglas, J. – Davies, J. (2008): The development of a conceptual model of student satisfaction with their experience in higher education. Quality Assurance in Education. 16 (1), p. 19-35.
Eurico, S. T. – Silva, J. A. M. – Valle, P. O. (2015): A model of graduates' satisfaction and loyalty in tourism higher education: The role of employability. 16, p. 30-42.
Evans, C. M. (1972): A Study of Personality Need Factors with Respect to College Student Satisfaction in a Small Church Related College Located in a Southern State," Counseling and Personnel Services (CG008971).
Gallarza, M. G. – Seric, M. – Cuadrado, M. (2017): Trading off benefits and costs in higher education: A qualitative research with international incoming students. The International Journal of Management Education, 15, p. 456-469.
Giner, G. R. – Rillo, A. P. (2016): Structural equation modelling of co-creation and its influence on the student's satisfaction and loyalty towards university. Journal of Computational and Applied Mathematics. 291, p. 257-263.
Hetesi E. – Kürtösi Zs. (2008): Ki ítéli meg a felsőoktatási szolgáltatások teljesítményét és hogyan? A hallgatói elégedettség mérési modelljei, empirikus kutatási eredmények az aktív és a végzett hallgatók körében. Vezetéstudomány, 39 (6), 2-17.
Jager, J. – Gbadamosi, G. (2013): Predicting students' satisfaction through service quality in higher education. International Journal of Management Education, 11, p. 107-118.
Mekic E. – Mekic, E. (2016): Impact of higher education service quality on student satisfaction and its influence on loyalty: Focus on first cycle of studies at accredited HEIs in BH. ICESoS 2016, Proceedings, p. 43-56.
Negricea, C. I., Edu, T., Avram, E.M. (2014): Establishing influence of specific academic quality on student satisfaction. Procedia - Social and Behavioral Sciences. 116, p.4430-4435.
Noaman, A. Y. – Ragab, A. H. M. – Fayoumi, A. G. – Khedra, A. M. – Madbouly, A. I. (2013): HEQUAM: A Developed Higher Education Quality Assessment Model. Proceedings of the 2013 Federated Conference on Computer Science and Information Systems pp. 739–746
Oliver, R. L. (2015): Satisfaction: A behavioural perspective on the consumer. New York: Routledge.

Østergaard P. – Kristensen, K. (2005): Drivers of student satisfaction and loyalty at different levels of higher education (HE): Cross-institutional results based on ECSI methodology. In New perspectives on research into higher education: SRHE Annual Conference; 2005; Edinburg: University of Edinburgh.

Parasuraman, A. – Berry, L. L. – Zeithaml, V. A. (1991): Perceived service quality as a customer-based performance measure: An empirical examination of organizational barriers using an extended service quality model. Human Resource Management, 30(3), p. 335-364.

Patterson, P. – Romm, T. – Hill, C. (1998): Consumer satisfaction as a process: a qualitative, retrospective longitudinal study of overseas students in Australia. Journal of Professional Services Marketing, 16(1), p. 135-157.

Pinto, P. – Eurico, S. – Silva, J. A. (2013): Satisfaction towards tourism higher education: The graduates' perspective. International Journal of Academic Research. 5 (4), p. 35-49.

Randheer, K. (2015): Service quality performance scale in higher education: Culture as a new dimension. International Business Research. 8 (3), p. 29-41.

Reichheld, F. F. – Markey Jr., R. G. – Hopton, C. (2000): The loyalty effect – the relationship between loyalty and profits. European Business Journal, 12(3), p. 134–139.

Reichheld, F. F. (2003): The one number you need to grow. Harvard Business Review, 81(12), p. 46-54. https://doi.org/10.1007/978-3-642-20110-3_2

Rojas-Méndez, J. I. – Vasquez-Parraga, A. Z. – Kara A. – Cerda-Urrutia A. (2009): Determinants of Student Loyalty in Higher Education: A Tested Relationship Approach in Latin America, Latin American Business Review, 10:1, 21-39.

Savitha, S. – Padmaja, P. V. (2017): Measuring service quality in higher education: application of ECSI model. International Journal of Commerce, Business and Management, 6 (5), Sep-Oct 2017.

Schertzer, C. B. – Schertzer, S. M. B. (2004): Student satisfaction and retention: A conceptual model. Journal of Marketing for Higher Education, 14(1), p. 79-91. https://doi.org/10.1300/J050v14n01_05

Shahsavar, T. – Sudzina, F. (2017): Student satisfaction and loyalty in Denmark: Application of EPSI methodology. PLoS ONE 12 (12): e0189576.

Sultan, P. – Wong, H.Y. (2010): Service quality in higher education – a review and research agenda. International Journal of Quality and Service Sciences. 2 (2), p. 259-272.

Sultan, P. – Wong, H. Y. (2013): Antecedents and consequences of service quality in a higher education context: A qualitative research approach. Quality Assurance in Education, 21(1), p. 70-95.

Temizer, L. – Turkyilmaz, A. (2012): Implementation of Student Satisfaction Index Model in Higher Education Institutions. Procedia – Social and Behavioral Sciences, 46, 3802-3806.

Tse, D.K. – Wilton, P.C. (1988): Models of Consumer Satisfaction Formation: An Extension. Journal of Marketing Research, 25, 204-212.

Tsiligiris, V. (2011): EDUQUAL: measuring cultural influences on students' expectations and perceptions in cross-border higher education. In: 4th Annual UK and Ireland Higher Education Institutional Research (HEIR) Conference, Kingston University, London, 16-17 June 2011, London.

Turkyilmaz, A. – Temizer, L. – Oztekin, A. (2018): A casual analytic approach to student satisfaction index modeling. Annals of Operations Research, 263 (1-2), p.565-585.

Wiers-Jenssen, J. – Stensaker, B. – Grogaard, J. B. (2002): Student satisfaction: towards an empirical deconstruction of the concept. Quality in Higher Education, 8(2), p. 183-195.

Winke, P. (2017): Using focus groups to investigate study abroad theories and practice. System. 71, p. 73-83.

Yi, Y. (1990): A critical review of Consumer Satisfaction. Review of Marketing (ed.: Zeithaml, V. A.), p. 68-123.

Yousapronpaiboon, K. (2014): SERVQUAL: Measuring Higher Education Service Quality in Thailand. Procedia – Social and Behavioral Scieces, 116, 1088-1095.

Zhang, L. – Han, Z. – Gao, Q. (2008): Empirical Study on the Student Satisfaction Index in Higher Education. International Journal of Business and Management, 3 (9), 46-51.

Conference Documents

Program of the conference

Thursday, November 22, 2018

Venue: Corvinus University of Budapest, Main Building (Budapest, Fővám tér 8), Faculty Club

12.00 – 13.00	*Registration*
13.00 – 14.10	**Opening**
13.00 – 13.10	**Welcome** Dr. György Drótos (Corvinus University of Budapest)
13.10 – 13.30	**Opening addresses** Prof. Dr. András Lánczi (Corvinus University of Budapest, Rector) and Prof. Dr. Klaus-Michael Debatin (Ulm University, Vice-President)
13.30 – 13.50	**New emphases of Innovation policy and financing in Hungary** Dr. István Szabó, Vice President, National Research, Development and Innovation Office
13.50 – 14.10	**Introductory speech: The Challenges of the Legal Environment and Financial Management at Hungarian Public Universities** Dr. Lívia Pavlik (Corvinus University of Budapest, Chancellor)
14.10 – 14.30	*Coffee break (Faculty Club)*
14.30 – 17.30	**Plenary Session I. (Faculty Club)** **Chair: Dr. György Drótos** (Corvinus University of Budapest)
14.30 – 15.00	**Keynote speech: In search for excellence through cooperation: 35 years of Danube Rectors' Conference** Mag. Friedrich Faulhammer (President, Danube Rectors' Conference)
15.00 – 15:10	Discussion
15.10 – 15.40	**Keynote speech: The implementation of dual study programs in the international context: lessons learnt** Prof. Dr. Arnold van Zyl (President, Duale Hochschule Baden-Wuerttemberg)
15.40 – 15.50	Discussion
15.50 – 16.10	*Coffee break (Faculty Club)*
16.10 – 17.30	**Plenary Session II. (Faculty Club)** **Chair: Dr. György Drótos** (Corvinus University of Budapest)
16.10 – 16.40	**Keynote speech: The Law 2.0 as an attempt to address organizational deficits stemming from the model of university governance in Poland** Dr. Dominik Antonowicz, head, Sociology of Science Unit, Nicolas Copernicus University, Poland
16.40 – 17.10	**Keynote speech: Reform of Higher Education and Science in Poland – the Key Changes** Bartłomiej Banaszak, Deputy Director at the Department of Science, Ministry of Science and Higher Education, Poland
17.10 – 17.30	Discussion
17.30 – 19.00	Social Program
19.00	*Gala dinner (Aula)*

Friday, November 23, 2018

Venue: Corvinus University of Budapest, Main Building (Budapest, Fővám tér 8), Faculty Club

8.30 - 9.00	*Registration*
9.00 – 9.40	**Plenary Session III. (Faculty Club)** **Chair:** Dr. Gergely Kováts (Corvinus University of Budapest)
9.00 – 9.30	**Keynote speech: Changing a System. From Distribution to Allocation** Prof. Dr. Carola Jungwirth (President, University of Passau)
9.30 – 9.40	Discussion
9.40 – 10.00	*Coffee Break (Faculty Club)*
10.00 – 11.30	**PARALLEL SESSIONS I.** (Faculty Club, Room 311, Room 2009)
11.30 – 12.30	*Lunch Break (Aula)*
12.30 – 13.00	**Plenary Session IV. (Faculty Club)** **Chair:** Dr. Gergely Kováts (Corvinus University of Budapest)
12.30 – 13.00	**Keynote speech: Development of performance measurement at the Estonian universities within the framework of management reform** Prof. Dr. Toomas Haldma (University of Tartu)
13.00 – 13.10	Discussion
13.10 – 13.30	*Break*
13.30 – 15:00	**PARALLEL SESSIONS II.** (Faculty Club, Room 311, Room 218, Room 2009)
15.00 – 15.20	*Coffee Break (Faculty Club)*
15.20 – 16:50	**PARALLEL SESSIONS III.** (Faculty Club, Room 311, Room 218, Room 2009, Aquarium room)
16.50	*Farewell Coffee (Faculty Club)*

Abstracts of keynote speeches

Friedrich FAULHAMMER
President, Danube Rectors' Conference

In search for excellence through cooperation: 35 years of Danube Rectors' Conference

The question of excellence in higher education should not be limited to debating quality output and organizational matters. In regard to concepts such as responsible science or third mission, excellence is also to be discussed in terms of cooperation. The development of the Danube Rectors' Conference (DRC) demonstrates cooperation in higher education in an effective way. The network of almost 70 member universities from 15 different countries of the Danube region is representing more than one million students of universities based in the Danube region. Initiated by the universities of Ulm, Linz, Vienna and Budapest in the time of the Cold War, the DRC has an important role for the higher education system within the Danube Region and therefore the European Union itself.

Carola JUNGWIRTH
President, University of Passau, Germany

Changing a System. From Distribution to Allocation

In her keynote speech „Changing a System. From Distribution to Allocation" Carola Jungwirth introduces the Bavarian University System characterized by its decision rights assignment, its performance evaluation and rewards. She refers to the University of Passau and its experiences in changing from a distributive into an allocative university, and reports on challenges and decisive steps in changing the system. Well prepared the University of Passau is now seeking new goals.

Lívia PAVLIK
Chancellor, Corvinus University of Budapest, Hungary

The Challenges of the Legal Environment and Financial Management at Hungarian Public Universities

Clear strategic goals, devoted academic and non-academic staff, cooperative management, talented students and proper infrastructure are not enough for an institution to become a successful university. There are some factors beyond the scope of the universities. The environment, first of all, the legal and financial management environment, which is determined by the state, is also a very important factor. Universities operating in a very competitive market need a flexible, predictable legal and financial background for achieving their long-term strategic goals.

We try to do our best, but unfortunately, we have to face enormous challenges due to the strict and rigid regulations that surround the public universities in Hungary. The main problem is that the compliance with these rigid rules is not only administratively difficult but actually, they obstruct our competitiveness in many different areas.

Recognizing these challenges, according to the Hungarian Higher Education Strategy different types of legal forms have been worked out that can provide more adaptable legal and financial management environment for higher education institutions.

Corvinus University has also taken part in the development process of the new institutional legal form. Based on this preparation process, in mid-September 2018, the Hungarian Government took a decision, which provides a basis for necessary law amendments to establish this new legal model for Corvinus University as of 1st of July in 2019.

Arnold van ZYL
President, Duale Hochschule Baden-Wuerttemberg, Germany

The implementation of dual study programs in the international context: lessons learnt

In summary the internationalization of the Baden-Wuerttemberg Cooperative State University (DHBW) has 3 elements:

1. Enhancing the intercultural competence of the graduates as well as by providing them with international experience.
2. Adapting the model abroad. Our institutional partners report that the availability of appropriately trained staff in an international context is becoming an important factor in foreign investment decisions. The DHBW supports our partner institutions abroad by adapting the model of dual education. Typically, the DHBW assumes a consulting role to jointly develop an appropriate curriculum with institutional partners, a local educational institution and the local educational authorities. The local educational institution and the

partners are responsible for the teaching whereas the DHBW restricts its role to curriculum design and quality control.
3. Providing advice on the establishment of the study model in emerging economies within the framework of international development aid programs. Examples of successful implementation of the model are in Latin America the establishment of the Duale Hochschule Latin Amerika as well as in Palestine the Dual Programs at the University of East Jerusalem.
This paper reflects on the experiences gained in Europe, Asia and Latin America in the implementation of the internationalization strategy of the DHBW.

Bartłomiej BANASZAK
Deputy Director at the Department of Science, Ministry of Science and Higher Education, Poland

Reform of Higher Education and Science in Poland – the Key Changes

The new act on higher education and science, which has come into force on 1st of October, revamps the whole system of higher education and science in Poland. Bartłomiej Banaszak will present those aspetcs of the reform which are the most important from the systemic point of view. After explaining the rationale for the reform the speaker will focus on issues such as: internal structure of Higher Education Institutions, financial autonomy and new funding streams, new model of evaluation of research output, new model of doctoral training as well as changes aiming at improving quality and relevance of study programmes. B. Banaszak will also offer an insight into the process of developing the reform proposal.

Dominik ANTONOWICZ
Head of Sociology of Science Unit, Nicolas Copernicus University, Poland

The Law 2.0 as an attempt to address organizational deficits stemming from the model of university governance in Poland

Law 2.0 offers a considerably new structural arrangement of university governance which by far causes the biggest controversies in the academic community. Undoubtedly, this is the most adventurous and far-reaching attempt to de-calibrate governance structure of universities in Poland since 1990. However, it largely still remains untold what long-term goals it should accomplish and what added value it shall contribute to higher education. So, this presentation wants to examine the new governance model in the light of organizational deficits stemming from the previous structural arrangements. By doing so, it aims (a) to identify policy actors that openly articulated their criticisms and demanded the modernization of university governance; (b) to analyze those aspect of university governance that were identified as its weakest sides; (c) to present the logic of new governance model and the way it wants to address identified deficits. In the concluding part, the presentation will contain some critical reflections about the chances that the newly implemented model will deliver outcomes expected by the government.

Toomas HALDMA
Head of Chair of Finance and Accounting, University of Tartu, Estonia

Development of performance measurement at the Estonian universities within the framework of management reform

The main purpose of the paper is to examine the performance information disclosure, its objectives and used performance measures at the Estonian public universities in the light of university management reforms.

Since 2012 the operating framework for the Estonian universities is extremely challenging, as the operating circumstances have been improved substantially in several directions. These directions include the compilation of new development plans of the universities, the university funding policy change, implementation of institutional accreditation system and changes in university governance systems.

The present study focuses on the linkages between disclosed performance information in various stages of performance management cycle using the PDCA (Plan-Do-Check-Act) cycle model. The

study also focuses on financial and non-financial indicators presenting performance of three main areas of university operations - teaching, research and service to the society activities. The findings reveal that the financial and non-financial performance indicators are weakly linked within the performance measurement of the main areas of university operations. Considering the influential factors affecting the improvements of performance measurement, legal regulatory requirements continue to have a substantial impact in Estonian universities.

The study uses predominantly document analysis, describing and analysing the performance information in strategic plans, budget strategies and annual reports in Estonian public universities. Additionally, a number of interviews have been conducted to explore some qualitative aspects of performance measurement issues at Estonian universities.

About Corvinus University of Budapest

Corvinus University of Budapest defines itself as a research university oriented towards education, where the scientific performance of the academic staff measures up to the international standard and the students can obtain a competitive degree having a standard and knowledge content identical to similar-profile universities and acknowledged on the European Union's labour market and on a global scale. The University admitting more than 14,000 students offers educational programmes in agricultural sciences, business administration, economics, and social sciences, and most these disciplines assure it a leading position in Hungarian higher education. At the same time, its key ambition is to display the institution's uniqueness and to exploit the synergies resulting from professional diversity and from studying multiple disciplines.

About Higher Education Research at Corvinus University of Budapest

The Center for International Higher Education Studies (CIHES) was established in May 2008. The Center is an umbrella organization for those researches who are teaching and pursuing research in various fields of higher education at different faculties of CUB. One of the goals of the Center is to join European research consortia and to contribute to their results in the analysis of the educational processes with suggestions and proposals. Research topics include: analysis of the three-cycle system and the introduction of Bologna-type study programs, internationalization of higher education, mobility in higher education, funding reforms in higher education, social dimension of higher education, pedagogical methods, quality assurance, institutional management.

Keynote speeches, presentations photoes and videos are available at the website of the Center for International Higher Education Studies at:

http://nfkk.uni-corvinus.hu/index.php?id=66731