STUDENTS' RESEARCH SOCIETIES AS TOOLS OF TALENT MANAGEMENT

Katalin Takács-György, István Takács
Károly Róbert College, Gyöngyös, Hungary
E-mail: tgyk@karolyrobert.hu, itakacs@karolyrobert.hu

Abstract

Role of talent management in higher education has improved in the first years of the21st century all over the word.
Prior to the social-economic transformation, the Hungarian higher education was characterized by special elite education. Only 10-15% of students with GCSE (General Certificate of Secondary Education) were admitted to the universities or colleges. Due to the stricter selection system the eminence was sort of precondition of continuing the studies at higher levels. At the same time the students' scientific activity was introduced more than sixty years ago, and developed at higher educational institutions as a further screen: the ambitious students could take part in special activities in addition to their compulsory curriculum studies, they could carry out research works independently or within the frame of teamwork.
Following the post-socialist transition the number of students in higher education swelled significantly: almost 50% of high school graduate students were admitted to universities or colleges. The increased number of students in higher education and the three-cycle transformation of training also urged the reconstruction of the framework of former talent management.
In the paper we give a short outlook of the popular forms of talent management, their experimental results, as well as the related problems. We examine the questions that need to be answered in the transformed higher education. These could lead back to the problems induced by the Bologna-system (multi-cycle training). They are the followings: problems of selection of talents in the shortened training time, respectively the shortened time available for those students' research works which lasted for several years previously, problems of changing tutorial and student scales of values and attitudes, questions of requirements of continuity in the training chain of bachelor – master – PhD level etc.
The situation of the students' scientific research work– a unique movement in Europe – was the focus of the study, furthermore its results and connection with the third level (Ph.D.) of the Bologna-system higher education.
Key words: *competition, eminence, mass education, students' scientific activity*.

Introduction

The transformation of higher education according to the Bologna process as well as the increasing number of students in higher education and their large proportion within their age group during the last two decades have imposed new conditions to all the actors of higher education. The modernization of the European higher education system is justified with the improvement process of the competitiveness of the European economy, in which key role is given to higher education by the so-called Lisbon Strategy.

The higher education suffers from continuous changes, must be suitable for numerous expectations. Without the claim of completeness here we mention beside the problem focusing, the competence base education the dichotomy of scientific training. (Abrahão and Lucchesi, 2009)

To meet the above mentioned inconsistent requirements of practice oriented business

ISSN 1822-7864

life and scientific academic life the adjusted knowledge transfer is needed. (Lőre and Bencsik, 2008

At the same time this process has led to the transformation of higher education into mass training. According to UNESCO and EUROSTAT data, in 2003 about 80% of the 20-24-year-old youth was involved in higher education in the USA, while this proportion was only 57% in the European Union and 50 % in Japan. The proportion of those participating in adult training was also about twice as much in the USA than in the EU countries. (Delivering on the modernization…, 2006) One of the key pieces of creating an innovative Europe – according to the Lisbon Strategy – is to increase the proportion of participants in higher education. Besides the above mentioned finding the talent students in the higher education, their conscious assistant to promote evolving talent is the duty of the teaching staff.

In the late 1980s' in Hungary a typical selection process, as a result of which only 20-25% of applying students were admitted (Figure 1), was used in the practice and formerly resulted that the admitted students should have met higher requirements. Assuming the normal dispersion of student capabilities, besides the presumable invariability of eminence frequency, it is easy to explain that mass training, that is the admission of about 80% of applicants – while the proportion of applicants from the 18-year-old age group jumped from the former 25-30% to 60-70% – increased the possibility of also involving the less talented into higher education. Opening the gates of higher education has temporarily delayed the date of entering the work, thus decreasing the rate of unemployment among the 18-24-year-old young career beginners and shifting it to the age group of the 23-25 years old. The proportion of training courses offering flexible adaptation, like economic and legal education, has also increased in the education structure.

Compared to the former era when it was an honor to become the student of a university or a college, today the higher education institutions should face the fact that the students are to be treated like consumers (George, 2007). This fact also differentiates the level of services in higher education because the needs of consumers are also different. The role of price/value ratio has become more important in choosing the adequate university or college, which requires a new approach from the institutions in regards to the pricing and calibrating of the level of training services. In this context it should be underlined that there will always be some „consumers" who prefer quality training, therefore the role of talent care remains important. One of the signs of globalizing higher education is the increased student mobility. The European education faces new challenges: through the student mobility the conflict of national diversity and loyalty can be felt; the place of patriotism and political loyalty should be found; the differences should be fitted or the equalities divided; and, last but not least, there is a question to answer: what is the minimum requirement of education which should be met by everybody (Follesdal, 2008).

PROBLEMS
OF EDUCATION
IN THE 21st CENTURY
Volume 42, 2012

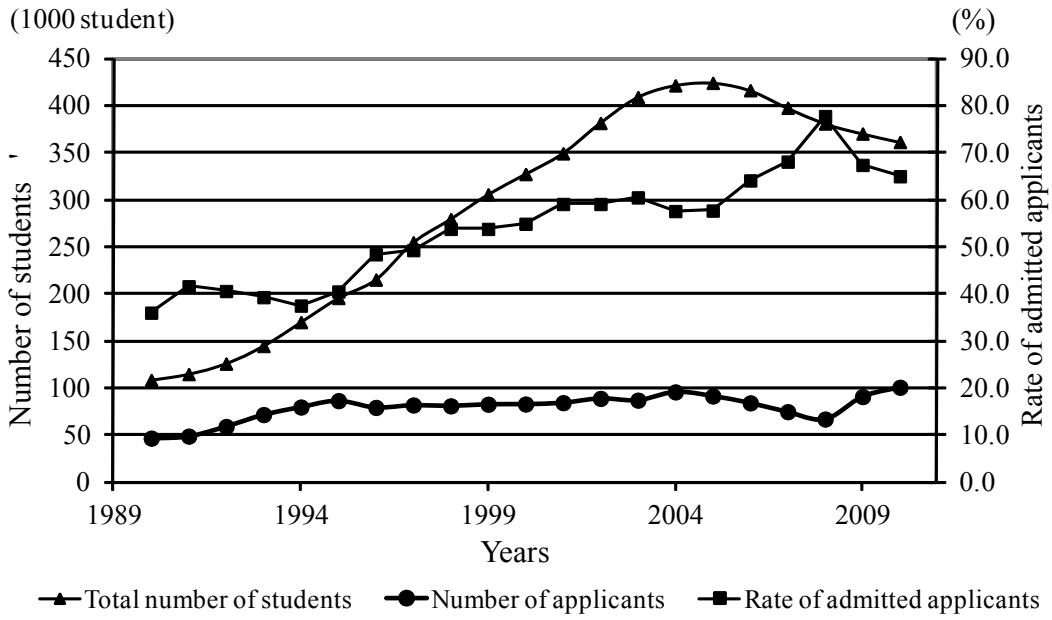


Figure 1. Rate of students, applicants and admitted applicants to higher education (1990-2010).
Source: based on data of Hungarian Statistical Office, own construction

Student mobility is also one of the possible means of talent management because the students with above-the-average achievements, possessing the required skills and abilities (language knowledge, flexibility, open-mindedness, curiosity, etc.) can acquire knowledge which is not offered at the home institution. They can join research projects for which the staff, material and financial conditions would not be available at home (Takács et al., 2009). The developed countries usually have a negative balance, that is less students are sent abroad to study than received. In the United States, for example, there are about 600 thousand foreign students in our days, while there are only about 200 thousand American students studying abroad. (Crow and Silver, 2008) In regards to the European Union, at present there are about 490 thousand students studying in foreign countries. This complex challenge induces the task for the actors of the European higher education to create those adequate tools which are able to reflect the different talents (Gamage, Mininberg, 2003).

The above processes suggested the implementation and support of scientific activities for students with the best abilities who intended to be involved in research projects.

The objective of the paper is to introduce a model which aims to stimulate the students in higher education to explore the talent in themselves, with which they become able to rise above the average, learn to conduct research, experience the joy of discovery and collect experiences in scientific publication and public appearances. This model is the system of students' research societies. There are similar schemes all over the world with similar results to collect talented students, but this system is unique because it has been operating for more than 50 years now, it has become a nationwide movement with very solid basis which represents high scientific standards and enjoys the support of the Hungarian scientific circles (Anderle, 2001). In connection with the students' research societies we can speak about an institutionalized model operating in the universities and colleges.

The §66 of the Hungarian Higher Education Act (CXXXIX of 2005) deals with talent care, specifying – among others e.g. Ph.D. training and special colleges for advanced studies

– students' research societies, as means of quality education and development of talents. The National Council of Students' Research Societies is named in §79 (6) of the Act thus ensuring the state recognition of the Council's work. The organization is a public body consisting of delegates from universities and colleges. Its objective is to support the institutional management of students' extracurricular scientific activities and to present biennially the scientific and artistic papers and works made in already 16 sections by today, in different fields of sciences and arts. Institutional conferences are typically held annually, while the national conferences are organized biennially. The presentations are made in the sections, further divided into subsections. The presentations in the subsections are evaluated by juries who award the prizes considering both the submitted essay and presentation held at the conference. Maximum one-third of the presentations can receive prizes (Koósné, Baranyainé, 2008; Takács et al., 2009).

Students' research activity is very close connected with the scientific research work carried out in Hungarian higher education. The role of scientific student societies in Hungarian research and higher education is well known and acknowledged, tradition and results certify its justification. According to the introduced Bologna system (bachelor – master – PhD) it must be devoted more interest to select the talent student and help them on their carrier (Szendrő, Koósné, 2002). The role of students' research societies is under considerable changes, at the very beginning of students' studies it must be developed the teachers – students relationship, trust.

The case study introduces who it works in the sample of the Faculty of Economics and Social Sciences of Szent István University, Gödöllő, and the Faculty of Economics and Social Sciences of Károly Róbert College, Gyöngyös, Hungary (2005 and 2011). It has an important role in the training of junior researchers. The Conference of Student Researchers at the Faculty is held annually, always on the last Wednesday of November, where the participating students have the opportunity to present their scientific achievements. Great number of papers, 45-65 per year, are presented and evaluated annually at the faculty conference. The evaluating committees at the local conference delegate the best papers and authors to the national competitions.

Methodology of Research

The Conference of Student Research Societies at the Faculties is held annually, where the participating students have the opportunity to present their scientific achievements. Great number of papers, 45-65 per year, are presented and evaluated annually at the faculty conference. The evaluating committees at the local conference delegate the best papers and authors to the national competitions.

The research is based on the following secondary data:

- Faculty registry of Research Student Society papers (2005-2011; Gödöllő, Gyöngyös);
- PhD Student Registry of Management and Business Studies PhD School of Szent István University (2006-2010);
- Proceedings of the 17th-20th National Conference of Research Student Societies (2005, 2007, 2009, 2011).

In order to characterize the scientific career the results of those authors were examined who participated in the biennial National Research Student Conferences as well as presented their papers at the local conferences. Their ranking and their rate of getting directly to the third stage of education: PhD training were also taken into consideration.

Data of the National Research Student Conferences between 2001-2011 were analyzed. They are the ones characterizing the scientific potential of the institutions, furthermore the activity and successfulness of student's research societies on an institutional level. The related activities of the two examined institutions were analyzed through simple statistical methods.

PROBLEMS
OF EDUCATION
IN THE 21st CENTURY
Volume 42, 2012

Results of Research

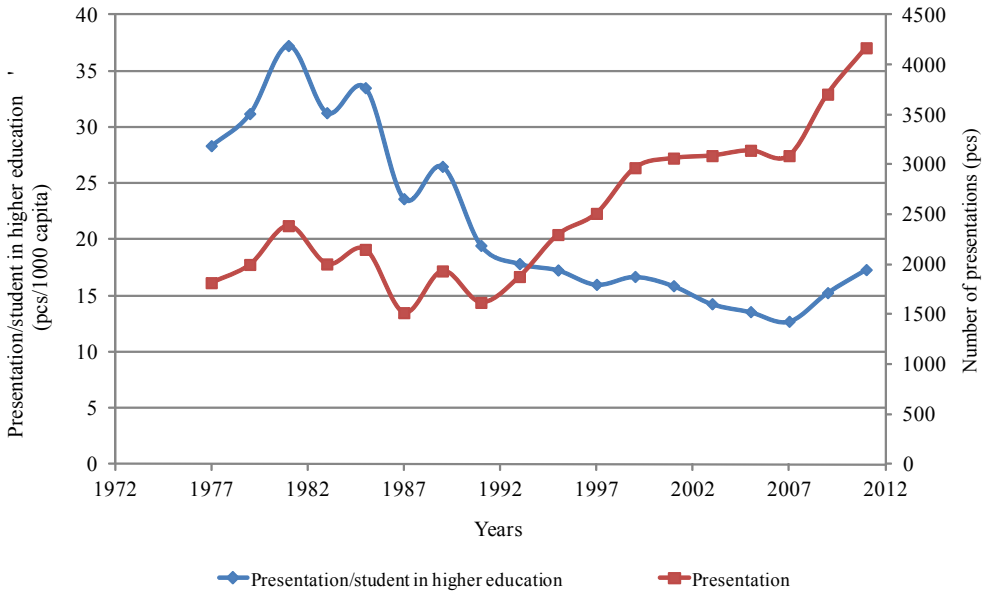
The research student movement could extend its base when the number of students in higher education increased. About 3000-3200 scientific papers were presented at the national conferences in the early 2000s (Table 1, Figure 2) but the rate of papers per one higher education student gradually decreased in its third compared to the peak in 1981. It refers to the changes in the composition of students and the motivation of students entering the expanded higher education.

Table 1. Dynamic of development of National Research Student Council, 1993–2011.

Nomination	XXI.	XXII.	XXIII.	XXIV.	XXV.	XXVI.	XXVII.	XXVIII.	XXIX.	XXX.
	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
Number of nominated thesis	–*	–*	–*	–*	3065	3503	3569	3477	3959	4470
Number of presented thesis	1869	2383	2568	2962	2687	3089	3143	3089	3761	4169

*data not available

Source: on the bases of Szendő and Cziráki (2009), own construction



Source: own construction

Figure 2: Number of students and number of research student papers per one higher education student (1977-2011).

In order to measure the scientific activity of students the rate of presentations given at the conferences of students' research societies and the number of students in the given higher education institution was used. Projected on the student capacity of higher education institutions,

the rate of presentations at scientific conferences is 7.4 papers/1000 students at the traditional universities; 5.4 papers at the universities and colleges founded between 1945 and 1980, while only 2.8 papers per one thousand students at the universities and colleges founded after the political transformation (average of years from 2001 to 2007).

According to the founder and type of institution, this rate is 7.3 at the public universities; 3.4 at the public colleges; 7.7 at private universities and 1.2 at the private colleges (Takács, Takácsné György, 2010). There were 82 papers (1.9%) from private universities and colleges and what was a surprising fact that 87 (2.1%) papers came from ecclesiastic institutions. The above figures prove that the students' research activity is considerably higher at the traditional large universities. The average of newly founded (following the political transformation) institutions was resulted by the low activity index of private colleges. It is not surprising but very interesting that private universities give high priority to the talent care, almost as high as at the public universities, because sort of an elite education is provided by these private institutions.

The local Councils of Students Research Societies organize the possibilities of students' introduction at scientific events, coordinates the students' preparation for the research student conferences and supports them in finding the appropriate research field and a tutor. The main activity of talent management at the faculty can be divided into three parts. It helps and coordinates the meeting of interested students and tutors and enhances the success of the research work. The Council organizes the Research Student Society Conference at the Faculty each academic year, delegates the students biennially to the National Conference of Students' Research Societies and other conferences. It looks for possibilities of publishing and helps the students involved in research to publish their works thus preparing them for entering the PhD training system.

On the basis of the above, the students' scientific activity at the Faculty competes with the index of traditional universities (7.7 papers/1000 students in 2009) which well reflects the role of the Faculty in scientific education.

When the higher education institutions are ranked for a certain – not official – point of view, one of the criteria is the number of full-time students reflected on the number of placements at the National Research Student Conferences. On the basis of this index, the Faculty of Economics and Social Sciences of Szent István University has had a very high place for years (it was No. 3 in 2009).

At the local conferences organized between 2005 and 2010, altogether 246 papers were presented in 38 sections (Table 2) in Gödöllő, 271 papers in Gyöngyös (Table 3).

Annually about 40-60 teachers work with the talented students at the Faculty, either as reviewers in the Evaluation Committees or as tutors, thus ensuring the conditions for the competition of students. Some additional figures for the correct evaluation of data: the number of students at the institution is 4795 (on 15 October, 2009, including full-time, correspondent, evening and distance courses). Research and administrative staff of 135 ensures the human background. A significant number of visiting lecturers participate in the education and research, providing the practical experiences and expertise to the students from the different fields of the business sector (Table 2). The same tendency could be observed in Gyöngyös, continuous increase in the number of presented papers (Table 3).

Analyzing the number and rate of students involved in the National Research Student Societies compared to those participating in the institutional Research Student movements, a dynamic growth can be seen between 2005 and 2010, which goes together with the increasing number of students. 40 students participated in the Faculty Conference in 2005, 52 students in 2006, 37 students in 2007 and 52 students in 2008. It was very interesting that at the Faculty Conferences held directly before the National Research Student Conferences, the number of presented papers had been always higher.

PROBLEMS
OF EDUCATION
IN THE 21st CENTURY
Volume 42, 2012

Let see an example for other situation a dynamic developing college: the case of Károly Róbert College. The master training was accredited only in 2009 at the College, so the talent management mainly belonged to the bachelor level. There can be observed an impressive increase in the number of students taking part in research activity and presenting their work conferences of the faculty (Table 3). While only one second place went to the a student of the College in 2005, one third place in 2007, one second and one third place in 2009, the last National Conference brought great success. There were one first place, 6 second and also six third places went to the Károly Róbert College. These results show the talent management activity has got stronger at the last years.

The growth of students participating in National Research Student Conferences is the result of deliberate talent management activity. According to the current Higher Education Act, those involved in research student activities and participated in conferences, have an advantage in the application to the PhD Schools at the Szent István University within three years from obtaining the university or master diploma. Examining the admission to the next level of scientific training, it can be stated that the of applicants to the paid courses make up 5-19% of those students who presented papers at the Research Student Conferences in the given year. The students participating in National Conferences continue their scientific research in higher proportions (18-55%). 20% of the applying students achieve some placement at the biennial national conferences which refers to the high level of scientific work.

Table 2. Number of sections and presented papers at the Faculty Conferences of Research Student Society between 2005 and 2011 at Szent István University, Faculty of Economics and Social Sciences.

Academic year of institutional Research Student Conference	Number of sections	Number of presented papers	Number of students preparing papers (head)	Number of section reviewers, section members (head)	Papers presented/ nominated at National Conferences
2005/06	7	40	40	45	6/22
2006/07	7	52	52	49	18/24
2007/08	5	36	36	47	14/17
2008/09	8	52	58	35	23/23
2009/10	11	66	66	62	-/33
2010/11	12	..	..	..	../46
2011/12	12	74	..	..	../..
Total:	**38**	**246**	**252**	**238**	**61/119**

Source: own construction on the basis of registries from Faculty of Economics and Social Sciences, Management and Business Studies PhD School (Szent István University) and National Research Student Society.

Table 3. Number of sections and presented papers at the Faculty Conferences of Research Student Society between 2005 and 2011 at Károly Róbert College, Faculty of Economics and Social Sciences.

Academic year of institutional Research Student Conference	Number of sections	Number of presented papers	Number of students preparing papers (head)	Number of section reviewers, section members (head)	Papers presented/ nominated at National Conferences
2005/06	5	40	44	20	5/15
2006/07	7	52	57	21	
2007/08	5	36	39	17	10/23
2008/09	7	49	54	25	
2009/10	6	40	42	24	28/32
2010/11	5	35	39	19	
2011/12*	3	19	22	16	../..
Total:	**38**	**271**	**297**	**142**	**43/70**

Source: own construction on the basis of registries from Faculty of Economics and Social Sciences (Károly Róbert College) and National Research Student Society

*Second conference will take part in May, 2012

Discussion

The results of our research reveal that the traditional, unique, conferences organized annually by the local Councils of Students' Research Societies can reach out to 7-8 % of the students taking part in the higher education at institutional level. Among them the best awarded ones present their scientific results on the biannually organized national conferences, in 16 areas of science. That is over 2 % of the total number of students in higher education. Almost 70 % of the students participating in the national conferences got directly into the third level of Bologna system, starting their Ph.D. studies, while additional 10-15 % starts their Ph.D. studies over the following five years.

The number of students taking part in scientific research societies has increased dinamically in the evaluated period in each examined type of higher educational institutions, due to the conscious talent management activity of the staff. The instituions pay more and more attention to promoting the young scientists at bachelor level already, since their results in national scientific conferences play an important role in their ranking. The above mentioned facts clearly verify that the earlier the rearing of young scientific generation starts the more determining base of the Bologna system's third level can be supported. Rearing the junior research staff, the talent management should receive high priority at the universities and colleges, the research student society can basically create the base of those students who are able to apply to the third level of multi-cycle Bologna training system. On the one hand, the business world requires the higher education to train specialists with practical knowledge, on the other hand, the scientific research should have more than marginal role. The Faculty of Economics and Social Sciences at the Szent István University will continue to focus on maintaining the efficiency of the above introduced talent management model in the changing three-cycle training. We should aim to set up the scientific background for students in the bachelor-level training, in order to manage the talented ones at appropriate levels. It is inevitable to create real research teams and research student groups and the prevailing faculty management should support this work because the time available at the first level of Bologna training is very little.

PROBLEMS
OF EDUCATION
IN THE 21st CENTURY
Volume 42, 2012

Conclusions

The questions of talent care is one the most important points in higher education which is offered to masses now all over the world. On the one hand it is a requirement towards higher education to train specialists with practical skills, as opposed to the traditional model, which focused primarily on the training of well-prepared civil servants according to the social needs at the time of its implementation

It cannot be predicted today, however, whether the higher educational sphere will be able to maintain the efficiency of the above introduced talent care model in the changing three-cycle training, whether it can form the students' scientific workshops in bachelor training which were so well managed earlier in the frames of non-divided training. The role of colleges is getting stronger, mainly due to the fact that most of the colleges were accredited for master training.

In the former times most of the students were able to present the outcomes of their research work and submit a scientific paper only in their fourth or fifth year of studies.

The students participating in National Conferences continue their scientific research in higher proportions (18-55%). 20% of the applying students achieve some placement at the biennial national conferences which refers to the high level of scientific work. Examining the admission to the next level of scientific training, it can be stated that 5-19% of the students who presented papers at the Research Student Conferences in the given year apply to the PhD Schools.

References

Linnakylä, P, Malin, A., Taube, K. (2004). Factors behind Low Reading Literacy Achievement. *Scandinavian Journal of Educational Research, 48* (3), 231-249.

Lyon, R. (1999). Overview of reading and literacy initiatives. In *Reading research anthology: The why? of reading instruction, consortium on reading excellence (CORE)*. Arena Press, Novato, California, USA, pp. 7-12.

Martin, M. O., Mullis, I. V. S., & Kennedy, A. M. (Eds.) (2003). *PIRLS 2001 Technical Report*, Chestnut Hill, MA: Boston College, USA.

Mullis, I. V. S., Martin, M. O., Gonzalez, E. J., & Kennedy, A. M. (2003). *PIRLS 2001 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools*, Chestnut Hill, MA: Boston College, USA.

Abrahão, M., & Lucchesi, S. (2009). Higher Education Policies for the XXI Century: The Future of Emerging Countries. *Problems of Education in the 21st Century, 15*, 90-98.

Anderle, Á. (Ed.) (2001). *A Magyar tudományos diákköri konferenciák fél évszázada (1951-2001)*. OTDT. Budapest, 312 p.

Crow, M. M., & Silver, M. (2008). American education system in a global context. *Technology in Society*, *30*, 279-291.

Delivering on the modernization agenda for universities: education, research and innovation (2006). Brussels. European Communities, p. 16.

Follesdal, A. (2008). Equality of education and citizenship: challenges of European integration. *Studies in Philosophy and Education*, *27*, 335-354.

Gamage, D. T., Mininberg, E. (2003). The Australian and American higher education: Key issues of the first decades of the 21st Century. *Higher Education*, *45*, 183-202.

George, D. (2007). Market overreach: The student as customer. *The Journal of Socio-Economics*, *36*, 965-977.

Koósné Török, E., Baranyainé, Réti G. (Eds.) (2008). *A TDK kézikönyve. Oktatáskutató és Fejlesztő Intézet. Országos Tudományos Diákköri Tanács Titkársága*. Budapest, p. 157.

Lőre, V., Bencsik, A. (2008). The Role of Education System in Knowledge Transfer among Young People. *Problems of Education in the 21st Century*, *6*, 136-144.

Szendrő, P., Cziráki, Sz. (2009). A tudományos diákkörök szerepe a tehetséggondozásban. *Educatio*, *18* (2), 155-164.

Szendrő, P., Koósné, Török, E. (2002). Tudományos diákkörök – fél évszázad a tehetséggondozásban. *Magyar Tudomány*, *47* (10), 1377-1383.

Takács, I., Takácsné György, K. (2010). Tehetséggondozás a magyar felsőoktatásban. Talent management in higher education. *Magyar Tudomány*, *171* (2), 236-245.

Takács, I., Takács, E., Baranyai, Zs., Takács-György, K. (2009). Talent management in Hungarian higher education. *Współczesne Zarzadzanie. Contemporary Management Quarterly, 4*, 73-90.

Advised by Naglis Švickus, SMC "Scientia Educologica", Lithuania

Received: *March 11, 2012* Accepted: *March 30, 2012*

Katalin Takács-György	Ph.D., Associate Professor, Károly Róbert College, Mátrai Street 36, H-3200 Gyöngyös, Hungary. E-mail: tgyk@karolyrobert.hu Website: http://alia.karolyrobert.hu/cms/netalon.xml?data_id=3
István Takács	Associate Professor, Head of Department of Business Economics, Károly Róbert College, Mátrai Street 36, H-3200 Gyöngyös, Hungary. E-mail: itakacs@karolyrobert.hu Website: http://alia.karolyrobert.hu/cms/netalon.xml?data_id=3

ISSN 1822-7864