
Development of talented university students – the case of the United States, the Netherlands, and Poland

Beata Jones¹, Katarzyna Perez², Maarten Hogenstijn³

Abstract

The goal of this article is to fill the gap in research about the development of talented students in emerging regions, including Eastern Europe, partially by highlighting the importance of talent development among university students and by explaining various approaches to student talent development used across the globe, specifically in the USA, the Netherlands, and Poland. Furthermore, this research aims to establish a need for the development of talented students at Polish universities, beyond stipends for research and study abroad opportunities. We carried out the investigation by the method of theoretical generalization and analysis of practice, using descriptive approaches in comparative education and presenting widely available secondary data regarding talent development at universities. They obtained the insights for this article via a document review of government reports, books, websites, journal articles, and conference proceedings. The three countries selected use different methods, allowing the researchers to offer pragmatic new insights for universities, organizations, and researchers alike. The results show a void in local talent development programs at higher education institutions in Poland. At a time when Polish higher education is in a process of reform, and the Conference of Rectors of Academic Schools in Poland has identified improvement of education for talented individuals as one of its goals, this research presents compelling reasons to enrich the opportunities for the development of talented students at Polish universities, and to show alternative paths forward.

Keywords: *talent development, higher education, honors education, high-achieving students.*

1 Beata M. Jones, Ph.D., Professor of Business Information Systems Practice & Honors Faculty Fellow, Neeley School of Business, Texas Christian University, Box 298530, Fort Worth, TX 76129, U.S.A., e-mail: b.jones@tcu.edu (ORCID ID: <https://orcid.org/0000-0001-5646-3176>).

2 Katarzyna Perez, Ph.D., Head of Department of Monetary Policy and Financial Markets, Poznań University of Economics and Business, al. Niepodległości 10, 61-875 Poznan, Poland, e-mail: katarzyna.perez@ue.poznan.pl (ORCID ID: <https://orcid.org/0000-0003-3331-8456>).

3 Maarten Hogenstijn, Ph.D., Senior Researcher, Research Centre for Talent Development in Higher Education and Society, Hanze University of Applied Sciences, P.O. Box 3037, 9701 DA Groningen, The Netherlands, e-mail: ma.hogenstijn@pl.hanze.nl (ORCID ID: <https://orcid.org/0000-0002-3065-5679>).

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1. Introduction

The demand for high-performing, talented workers, has been steadily increasing in companies across the globe (Farndale, Scullion, & Sparrow, 2010) as companies strive to achieve a competitive advantage. According to a recent study at Mercer (2019), “Mindful of the human capital risks associated with constant change, organizations are realizing that people-centered transformation is the key to transferring the shockwaves of disruption into sparks of brilliance.” People are the key to transforming the workplace, as organizations face the ongoing disruption brought by information technology innovations and globalization (Narayanan, Rajithakumar, & Menon, 2018). Talented employees are particularly important in this transformation process as they possess unique skill sets to function effectively in such an environment (Hewitt, 2008). A number of researchers consider talented individuals as a source of competitive advantage in organizations, often influencing the performance of their organizations (Michaels, Handfield-Jones, & Axelrod, 2001; Paauwe & Richardson, 1997; Mazurkiewicz, 2017). A loss of that talent, or lack of available talent pool, often threatens organizations’ abilities to perform in the new economy and makes talent attraction and retention one of the top strategic priorities according to Schwartz, Bersin, & Pelster (2014), Ashton and Morton (2005), and Stec, Filip, Grzebyk, & Pierscieniak (2014).

While scholars have studied extensively the topic of talent development and talent retention in organizations, there is a shortage of studies on talent development in the emerging markets. Additionally, the subject of talent development among university students, who are feeding the potential talent pool in businesses, has not received as much research attention as talent development in organizations. Institutions of higher education within the developing regions, including Eastern Europe, lack significant research about the development of their talented students. The goal of this article is to partially fill this research gap by highlighting the importance of talent development among university students, and by showcasing various approaches to student talent development used in different countries. Furthermore, this research aims to establish a need for talent development of students at Polish universities, beyond stipends for research and study abroad opportunities.

The remainder of the article begins with a discussion of the concepts of talent and talent development, as they pertain to employees and students, within an organizational and university setting. Then, the researchers present the discussion of the three approaches to talent development of university students in the United States, the Netherlands, and Poland. In the final part of the study, the researchers present conclusions and a brief agenda for future research.

2. Research approach

The researchers carried out the study by the method of theoretical generalization and analysis of practice, using descriptive approaches in comparative education and presenting widely available secondary data regarding talent development approaches at universities in the United States, the Netherlands, and Poland. Relevant databases were scanned using keywords such as “honors education,” “talent development,” “gifted education,” together with “student,” “higher education,” “college,” or “university.” The authors obtained the insights via a document review of government reports, books, websites, journal articles, and conference proceedings. The three countries selected use radically different approaches to develop talented students: the USA is a country with the most developed institutionalized structure of university honors programs in the world, initiated almost 100 years ago; the Netherlands, the European pioneer of focusing on excellence, initiated honors programs in early 1990; and Poland – the sixth in population and seventh in GDP in the European Union, with over 400 universities (Sulkowski & Seliga, 2018) and 40% of Poles aged 25-34 with higher education (Ministry of Economic Development, 2017) – still has not much to offer talented students beyond money. The above choice of countries allows the researchers to compare the talent development approaches and offers pragmatic new insights for universities, organizations, and researchers alike.

3. Results and analysis

3.1. Talent development in organizations

Researchers have studied the concept of *talent* extensively, across various disciplines, proposing wide-ranging, blurry definitions. They have reached no consensus on talent definition (Brown & Tannock, 2009). In general, *talent* is an attribute of an individual: an above average ability or skill, or a high degree of aptitude (Mazurkiewicz, 2017). Scholars who write about the discovery of talent often cite the work of Renzulli (1978), who identified three characteristics of individuals recognized by professional colleagues as high achieving: above-average abilities, above-average task commitment, and above average creativity. Professional excellence results from a synthesis of these three characteristics. Sternberg (1993) identified criteria for individual talent identification as excellence, rarity, productivity, demonstrability, and value. From the organizational perspective, talent manifests itself in outstanding achievements (Simonton, 2011), and great human potential for further development (Glowacka-Stewart & Majcherczyk, 2006). Talented individuals show high levels of motivation, have more grit, are more curious, and want

to develop themselves personally and professionally. Another way to describe talent is by analyzing a set of core competencies, mental characteristics, and behavioral characteristics of an individual (Jokinen, 2005). To benefit from talented individuals, organizations must provide conditions for their employees to use their talents and offer appropriate development (Mazurkiewicz, 2017).

The topic of *talent development* has also attracted considerable research in organizational settings, yielding a range of definitions (Ashton & Morton, 2005; Collings & Mellahi, 2009; Gallardo-Gallardo, Nijs, Dries, & Gallo, 2015; Lewis & Hackman, 2006). Originally coined by McKinsey & Company's 1997 study, the term "talent development" involves organizational efforts to attract, develop, and retain talented individuals (Stahl, Björkman, Farndale, Morris, Paauwe, Stiles, & Wright, 2007). Talent development is important in an organizational setting because an organization can derive a competitive advantage if it has resources that are valuable, rare, and difficult to imitate, and have no substitutes (Barney, 1991). Intellectual capital is one such rare resource. According to De Vos & Dried (2013), talent development requires organizations to allow talented individuals to move within the organization, to offer career management tools, such as coaching, mentoring, individual development plans, and rotation, with a focus on individual achievement and responsibility. Berger & Berger (2004) identified the top factors for talent retention as competitive pay in the labor market, skill development, an understanding of highly talented personnel, clear expectations, and HR management in compliance with the business goal.

3.2. Talent development of university students

If universities want to prepare talented students for their careers in organizations, talent development in a university setting is a key issue to understand. Other reasons for developing talented students fall in one of the following categories (Wolfensberger, 2015, p. 16):

- 1) Building a culture toward excellence as a part of an agenda of an institution or a country;
- 2) An equal opportunity culture for realizing one's potential;
- 3) Competition between institutions of higher learning, including competition for talented students;
- 4) Competition between countries in national university performance rankings; and
- 5) The need for innovating

Talent development of university students has an almost 100-year-old, rich history in the United States, and in the last two decades has also become a focus in Europe (Sirius Programme, 2010), with the Netherlands leading the efforts

(Wolfensberger, 2015). Commonly referred to as “honors programs,” these talent development programs aim to promote excellence in higher education, offering unique opportunities to talented students. The number of honors programs offered at European universities over the last decade has been steadily increasing (Long & Mullins, 2012). While Wolfensberger (2015) presents an overview of honors education in 11 European countries (the Netherlands, Belgium, Luxemburg, Denmark, Norway, Sweden, Finland, Iceland, Germany, Austria, Switzerland), new programs are being created in other places in Europe, such as France, Italy, Russia, Romania, Lithuania, and across the globe — for example in Canada, Australia, Morocco, Saudi Arabia, and China.

Given the roots of U.S. honors in the liberal arts, the research models of their home disciplines have often driven U.S. practitioners. Thus, the literature on honors in the U.S. contains an array of inspiring essays about honors practices, captivating case studies, and an occasional survey across institutions (Jones, 2016). In contrast, European honors are more rooted in the sciences, which yielded more systematic studies of such programs that led to a more generalizable understanding of the field — e.g., Wolfensberger’s books in 2012 and 2015. Scientific research on how to teach talented students in tertiary education is still in its early stages, but a few studies are worth noting. Wolfensberger’s (2012) U.S. and Dutch-based investigation revealed the three-pronged approach to honors teaching: creating community, enhancing academic competence, and offering bounded freedom. Van Heugten and colleagues (2016) identified an evidence-based set of competencies required for highly talented international business professional to deliver excellent performance. Universities could use these competencies – which include achieving results, innovating, seeing patterns and interrelationships in a global context, communicating, and self-reflecting – to guide the development of their students and thus create a talent-rich pipeline of employees for organizations. A number of similar studies about excellent professionals in other fields have also been performed (e.g., Paans, Wijkamp, Wiltens, & Wolfensberger, 2013; Fuller, Heijne-Penninga, Kamans, van Vuuren, De Jong, & Wolfensberger, 2018).

Honors education has three different forms: as a disciplinary program, an interdisciplinary program, or a multidisciplinary program (Wolfensberger et al., 2012, p. 157). Disciplinary programs function within a given major or discipline, interdisciplinary programs exist university-wide, and multidisciplinary programs take the place of a regular bachelor program. Each institution brings a unique design to their programs, offering various talent development opportunities to select talented students, based on their need, desire, university mission, local context, and other variables. Scager, Akkerman, Keesen, Mainhard, Pilot, & Wubbels (2012), show that a typical honors student significantly differs from a non-honors counterpart by having more desire to learn and excel. Kaczvinsky

(2007) demonstrated that honors students have more confidence, are more intellectually interested, and are open to new ideas.

3.3. Talent development of university students in the United States

The concept of honors education in the United States dates back to the early 1920s and to the work of Aydelotte (1944), president at Swarthmore College. His initial goal was to instill in talented students a sense of confidence and ambition, based on the teaching practices he experienced at Oxford, U.K., as a Rhodes Scholar. Today, approximately half of the universities and colleges in the United States offer some form of honors undergraduate education (Wolfensberger 2012 p.13). Though their goals have somewhat changed over the years, the practice still reflects a focus on active learning, community learning of students and faculty acting as peers, and challenging, interdisciplinary work offered within the regular curriculum toward the degree (Clark & Zubizarreta, 2008).

The National Collegiate Honors Council (NCHC) is a professional association of undergraduate honors programs and colleges in the United States that supports the work of undergraduate honors students, faculty, administrators, and staff. It has been in existence since 1966 and today it continues to enrich the education of over 330,000 students across 900 member institutions. An online guide is available that lists all honors programs within the United States (NCHC, n.d. -b). These programs all differ in their guiding principles, such as mission, vision, values, students they serve, governance approach, curriculum, size, admission and retention criteria, faculty selection, opportunities provided to students, scholarship offerings, etc. (Jones, 2016). The NCHC offers no single definition for honors education, given the diversity of educational experiences across various institution of higher learning. However, the NCHC website provides basic characteristics of honors programs and honors colleges, as well as guidelines for the modes of honors learning (NCHC, n.d. -a). The goal of honors learning in the United States now is to offer “opportunities for measurably broader, deeper, and more complex learning-centered and learner-directed experiences” (NCHC, n.d. -a). The modes of learning include research and creative scholarship, “multi- or interdisciplinary learning,” service learning and leadership, experiential learning, and learning communities.

For example, Texas Christian University (TCU) in Fort Worth, Texas has an honors college, which started as a program over 50 years ago (John V. Roach Honors College, n.d.). At its core, it “seeks to empower, inspire, and motivate high-achieving students to become leaders in our global society.” To accomplish this mission, the college:

- 1) “Promotes self-discovery, critical thinking and conscientious understanding of world cultures through rigorous academic endeavors and creative inquiry in the context of big questions, great ideas, and relevant issues that transcend the curriculum.
- 2) Offers unique residential, curricular, and co-curricular opportunities, fostering a community of scholars for whom vigorous engagement with local, national, and global communities becomes a way of life.”

The honors curriculum consists of five courses taken during the first two years of the program for lower-division honors and three honors colloquia or an honors thesis project for upper-division honors. The focus of honors coursework is on engagement rather than on doing more work, or work that is more difficult. In many instances, the honors coursework completed counts toward the students’ degree requirements. For more details, please see John V. Roach Honors College (n.d.). Currently, more than ten percent of undergraduates at TCU are members of the honors college, established in 2009. The desirability of the honors offering has significantly improved the academic profile of the university, bringing applicants that are more talented.

NCHC publishes two journals with research dedicated to honors education: *Journal of the National Collegiate Honors Council*, and *Honors in Practice*, and the NCHC community meets annually at a conference to share student and faculty research, discuss professional development opportunities, share resources, and highlight membership achievements.

In a special issue of the *Journal of the National Collegiate Honors Council*, 39 university presidents hailed the value of honors education at their universities and colleges, naming such important outcomes as:

- 1) Institutional advancement through better retention, fundraising, and alumni relationship;
- 2) University innovation;
- 3) Improved critical skills among students, including lifelong learning;
- 4) A greater sense of community that extends beyond the honors cohorts and the campus into the greater community; and
- 5) Transformation of campuses, students, and surrounding communities (Forum on the Value of Honors, 2015).

The following quotation captures a typical student perspective on the value of honors education:

In my experience, an honors class is comprised of enthusiastic intellectuals who are not only smart but also supportive of each other. Among the other curious minds, I can share my ideas with people who will respond to me with their own perspectives. I have no fear of sounding “too smart,” or being labeled a “dork” for being knowledgeable or wanting to understand more. The teacher and students facilitate a stimulating environment where each

person is a welcome and prized contributor. As intellectuals, we seek insightful discussions and enlightening viewpoints, not just to pass a class but for our own personal enrichment. I believe that along with the heart, the mind is a person's greatest gift. In an honors program, both are nurtured. (NCHC, n.d. -c)

The quote above echoes the research findings of Kotschevar, Ngorsuraches, & Bott-Knutson (2018), who found that honors contribute to the lives of honors alumni not only professionally, but personally as well.

3.4. Talent development of university students in the Netherlands

Historically, the Dutch had an egalitarian education culture, believing that the weaker students needed special programs and that programs for talented students were inappropriate. However, with the new focus on excellence in the early 1990s, honors programs focused on talent development made their first appearances in Dutch university settings. Currently, all 14 research universities and the 17 largest universities of applied sciences (with over 5,000 students) have established honors programs (Wolfensberger, 2015). These honors programs first developed at the bachelor level and later expanded to master's programs, offering talent development opportunities typically above and beyond the coursework required for their select degree. An important trigger for the development of these programs was the government-funded Sirius Program, running from 2008-2014, with the specific goal of "promoting excellence in higher education," based on the need for more highly educated individuals capable of handling complex, multidisciplinary problems (Ministry of Education, Culture, & Science, 2011). A budget of around 60 million euros was available to start such programs (Wolfensberger 2015, 51). The Sirius Program's goal was for honors education to become self-supportive after the program ended, which has happened. While the focus of individual honors programs is continually shifting, institutions have generally kept on supporting honors education.

When the Sirius Program neared its end, the Ministry of Education, Culture, and Science commissioned research on the "excellence that has been realized through the program," resulting in a (Dutch-language) report (Allen et al., 2015). This report also compared the "Dutch approach" to honors in higher education to the approaches of other countries, identifying a number of specific factors:

- 1) The Dutch higher education system is a binary system of research universities and universities of applied sciences. In both types of institutions, honors programs have developed. The approach in the universities of applied sciences is unique, for example focusing on educating 'reflective professionals';

- 2) Programs have developed across a wide spectrum, from disciplinary programs focusing on deepening knowledge to multidisciplinary programs focused on broadening knowledge, with also a great variety in program sizes;
- 3) A focus in some institutions is on extracurricular programs;
- 4) There is a new development of honors education at the master's level;
- 5) A lack of additional financing for honors students (p. 17).

Regarding the effects of honors programs on students, it was still too early to draw major conclusions. Early signs indicated that some cognitive competencies develop more among honors students as they mature and that honors programs play a role in the retention of the most talented students (pp. 39-40). However, what became clear was the benefit to the institutions. Honors programs work as a laboratory for innovation: they have clear spin-offs into regular education programs and serve as an experimental setting for collaborative arrangements among research, education, and society (p. 89).

Research on the topic of “added value” of honors for students is emerging in different institutions, some of it taking a longitudinal approach (Scager et al., 2012; Banis-Den Hertog, 2016; Kolster, Dijk, & Jongbloed, 2016; Schutte, Kamans, Wolfensberger, & Veugelers, 2017; van Gorp, de Jong, Kamans, & Buttner, 2017). Work by Kool, Mainharda, Jaarsma, Brekelmans, & van Beukelen (2016) demonstrates that honors education in the Netherlands can have positive outcomes for students: not only did honors alumni have higher average grades at the end of their studies, but they also had a higher work engagement post-graduation. Banis-Den Hertog (2016) focused in her dissertation on the differences between honors and non-honors students in achieving professional excellence, concluding among other things that participation in an honors program influences innovative behavior.

Honors programs vary in size, duration, disciplinarity, and admission requirements, even within one institution. For example, Hanze University of Sciences in Groningen, the Netherlands offers over 50 different honors programs called ‘talent routes,’ tailored to talented students’ individual needs, the requirements, and set-up of the regular study programs. At the institution’s central level, Hanze Honours College is a small unit with dedicated staff performing, among other things, academic quality assurance. The programs offer more in-depth knowledge or more breadth of knowledge development through, e.g., inspiring and complex assignments at prestigious organizations (Hanze Honours College, n.d.). To receive an honors certificate upon graduation, students need to take courses at honors level totaling 30 credits (ECTS; equaling around 800 hours of work) in addition to their regular degree requirements.

In addition, there is substantial research on the roles of honors teachers (e.g., Wolfensberger, 2012; Heijne-Penninga, Wijkamp, Hogenstijn, &

Wolfensberger, 2018). Wolfensberger's (2015) work is the latest full overview of Dutch honors education. Since then, the Dutch honors community has organized itself in three informal networks: one for research universities, one for universities of applied sciences, and one joint network. This network regularly meets and has an online community (using the digital platform Slack), which allows the participants to access information, ask questions, and exchange good practices. More recently, a new website about the network was launched at www.honoursnetwerken.nl. Dutch universities are also a part of the European Honors Council (EHC) established in 2016, which focuses on networking, sharing and exchanging knowledge, and learning from its members (EHC, n.d.). EHC publishes a *Journal of the European Honors Council*, which recently published a special issue on Good Practices in Honors Education (2019). EHC is also involved in the organization of honors conferences, held annually from 2012-2018 in the Netherlands. In a notable development, honors or "excellence" programs have also spread to vocational education in the Netherlands starting in 2015, partly triggered by the availability of small, government grants to develop such programs, and additional research grants to follow these programs.

3.5. Talent development of university students in Poland

A wide range of internal and external challenges have influenced Polish universities in the last 30 years, including the introduction of market economies; aggressive, ongoing reforms in higher education; and the "Europeanization" and internationalization of education (Dobbins, 2017). Given the widespread perceptions of educational inferiority of Central and Eastern European education, and poor results of Polish universities in international university ranking (Best Global Universities in Poland, 2019), Poland continues to reform higher education to change that image. Strategy 2020 specifically identified the improvement of education for talented individuals as one of its goals (Woznicki 2010).

The approach to the development of talented students at higher education institutions in Poland currently is that of career management rather than talent management. Researchers typically interpret career management concept from the perspective of an individual, whereas they view talent development from the perspective of an organization (Mazurkiewicz, 2017). Until the end of the first decade of the 21st century, the career management practices in Poland were still far from converging with the Western models and facing many challenges (Skuzza, Scullion, & McDonnell, 2013). Lately, these career management practices have improved and become more standard, moving beyond the cultural constraints of the communist past (Waters-Sobkowiak,

Kowalski, & Smits, 2018). The talent management practices, however, have not progressed at the same pace. Sławiński & Woźnicki (2014) indicate the need for cooperation between lower and higher education institutions in order to improve the development of talented students, especially since, after the period of transition from communism to democracy in 1989, higher education became the new standard of education in Poland. The “massification” of higher education⁴ has consequences for universities and their graduates alike: it negatively affects the efficiency of academic teaching (Wolszczak-Delracz 2013; Brzezicki & Pietrzak 2018), and it reduces the labor market advantage of higher education graduates (Jasiński et al. 2017), which make the issue of developing talented students even more important.

The intellectual capital of Polish university students is high (Fazlagić 2012). They are known for being knowledgeable and skilled (Zupan, Dziwanowska, & Pearce, 2017). However, even today in Poland, each student must manage his or her own academic career, which often requires inter-organizational mobility – a move to study at another university – and can result in a talent drain for Poland, as individuals often chose to relocate internationally after graduation. Poland suffered the greatest brain drain in the EU during 2017, with the highest number of highly educated movers leaving the country (576,300 individuals) (European Committee for the Regions 2018, 12)

Unlike their U.S or Dutch counterparts, talented students in Poland primarily receive financial support in the form of stipends, scholarships, and grants for outstanding learning results and research, given internally (within the university) or externally (outside the university), with public or private means, mainly for the development of an individual student. The development of students as groups is available in some disciplines, but the focus is not on the most talented ones.

The universities in Poland finance their internal support for talented students from their own scholarship funds. The standard and most common form of support are the scholarships for the best students awarded by a rector of a higher education institution, whether public or private. According to Polish law on higher education, universities can grant such scholarships to a maximum of 10% of the best students of an institution who either had the high-grade average or have scientific, artistic, or sports results in international or national competitions. The best of the best students must apply for this scholarship. Social stipends apply to all students, not only talented ones, who are in a difficult financial situation.

⁴ The “massification” of higher education in Poland has become an issue after the period of transition. Until the beginning of the 1990s higher education degree in Poland was considered elite, as only about 10% of youth completing upper secondary school were admitted to university each year. Since the 1990s this number has continuously grown and from the middle of the 2000s until today it is at more than 50% with a net enrolment ratio of around 40% (Statistics Poland, 2015 after Janicki et al. 2017).

The external support for talented students comes from two main sources: public and private. Four institutions provide public funds for talented students:

- 1) Ministry of Science and Higher Education (MSHE) for scholarships and grants,
- 2) National Bank of Poland for students' stipends,
- 3) Province governors in Poland for talented student scholarships (Stypendium Marszałka Województwa), and
- 4) National Center of Research and Development (NCRD), which in August 2011 took over the implementation of strategic programs of EU, including national Operational Program Knowledge Education Development, where universities undertake projects for improving all students' competences.

The funds available from private sources include scholarships, awards, or internships through different student competitions offered by companies from a private sector in different areas of business activity, as well stipends/scholarships for studies abroad or in Poland, and additional activities offered by foundations. The following facts about external financial support are worth noting. Independently of the nature of their sponsor, all external forms of support require students to participate in a competition. Therefore, most talented students must apply and be among the winners of the competitions to get them. The constant competition for opportunities to develop takes away the students' time from actually growing their skill sets.

Programs financed from public funds started to appear in Poland since the country joined the European Union in 2004. However, after a serious amendment of the law on higher education in 2011, universities saw more of an increase in expenditure on higher education from the state budget and offer more funding opportunities to students. A few programs financed by private foundations have existed since the 1990s, but the number of offering grew in 2004 when the Polish government launched the 1% of income tax donation. The list of foundations sponsoring young talent is much richer now. A number of foundations not only sponsor the scholars financially but also offer additional activities, such as summer schools, workshops with specialists, networking, participation in conferences, etc. However, these foundations are highly distributed and the fact that students reach them is more their luck or determination in finding them, rather than a consequence of some national or at least regional, unified or a well-recognized student talent development approach. Interestingly, many foundations focus on talent development of students from poorer regions or families as well as smaller towns or villages. Also worth mentioning is the fact that many local foundations concentrate only on students from primary or secondary schools, which implies their potential participation in similar projects at the university level.

Table 1.10 presents some of the possible sources of support for the development of talented university students in Poland. It shows some of the possible sources of support for the development by public means, but it lists only select examples of the ones sponsored by private means. A long list of private sponsors of scholarships/stipends/internships and accompanied developmental activities for talented students are available at www.mojestypendium.pl.

Table 1.10. Possibilities of Polish talented students' development from external sponsors

Name of possibility	Sponsor	Duration	Amount granted total	Monthly salary	Other information
1	2	3	4	5	6
Public means					
Diamond Grant (Diamantowy Grant)	MSHE	max 48M	220 000 PLN	max 2500 PLN	Program for BAs, who conduct research and prepare a Ph.D. thesis without MA. Since 2012
Scholarship for students with outstanding achievements	MSHE	one payment	15 000 PLN	-	For outstanding achievements in the previous academic year
Bridge Scholarships (Stypendia pomostowe)	National Bank of Poland	10 M	5 000 PLN (1st and 2nd year of studies) or 10 000 PLN (3rd and 4th year of studies)	500 or 1000 PLN	Polish-American Liberty Foundation funds and manages the program. National Bank of Poland is one of the partners in this program.
Scholarship of the Province Governor for students with outstanding achievements	Province budget	one payment	around 6 000 PLN	-	Province governors offer scholarships for students with roots in their provinces of all levels of education (primary, secondary and higher). The possibility is not available in all provinces in Poland. Scholarships granted to all students or to some group of students, e.g. in Lubuskie Province for students of medicine, in Pomorskie for students with sports achievements, Province of Wielkopolskie and Podkarpackie finance all students

Name of possibility	Sponsor	Duration	Amount granted total	Monthly salary	Other information
1	2	3	4	5	6
Erasmus+ scholarship for studies or internship	EU	6 or 12 M	-	350-600 EUR depending on the location of studies or internship	3 groups of countries to visit; 1 semester of studies is the most popular among Polish students
Participation in Project of Increasing Students' Competencies	National Center of Research and Development	up to 3 years	max 20 000 PLN per student	none	Higher education institutions apply for a grant on financing a project of increasing students' competencies in the area of communication, IT, foreign languages and professional skills; a project must assume activity of a student in three of five areas of activities: professional training, workshops, projects with companies, language learning, and professional local and international visits;

Private means

1	2	3	4	5	6
Scholarships for studies in Germany	DAAD	1-2 years	-	850 EUR	For German and English speaking students, mainly of MA studies.
Graduate Student Award	Polish-American Fulbright Commission	1-2 years	max 47 000 USD, depending on the State of studies		For students with a BA degree;
Start2Star	Foundation of Jolanta and Leszek Czarnecki through Leslaw Paga Foundation	all studies (3 or 5 years)		1600 PLN	14 persons a year; for outstanding talents, not only best students but active in society, charity, etc.; by 2019 already 12 editions
Scholarship for talented students	"Talents" Stipend Fund (Fundusz Stypendialny Talenty)			400-1500 PLN	50 persons a year; scholars have many extra activities supporting the development of their talent (workshops, coaching programs, networking, summer camps, etc.)
Business Academy Deloitte		1-3 months of a competition	award and an internship/ job in Deloitte		Competitions in different areas of business (finance, law, taxes, accountancy, etc.)

Name of possibility	Sponsor	Duration	Amount granted total	Monthly salary	Other information
1	2	3	4	5	6
Stipends for best students from poor families	Absolwent Foundation	3 years, 10M a year	15 000 PLN	500 PLN	From 1998/1999 to 2015/2016 Foundation granted stipends for 77 students from small towns. Extra social and educative activities for them also provided.
Bridge Scholarships, Polish American Internships, Entrepreneurship, Finances, And Management Competition	Educational Enterprise Foundation				Since 1991; many activities (workshops, conferences, competitions, charity activities) for talented students;

Source: websites of sponsors.

4. Conclusions

Recently, educational institutions have made significant improvements in the education of talented individuals throughout the world. Despite a long history of talent development throughout the educational process in countries such as the United States, the education of talented university students in Europe has been gaining ground only over the last two decades, with the introduction of curricular, co-curricular, or extra-curricular honors programs. Research shows a strong connection between the country’s goal to be economically competitive in the global economy and its policies regarding the education of talented individuals (Avcu & Er, 2017). While the United States and the Netherlands currently offer talent development programs in addition to stipends for research, and study abroad opportunities, Poland limits their developmental efforts of talented university students to mainly financial investments in their future, potentially missing the opportunity to retain the talent at home and capitalize on its full potential. While talented students in Poland can pursue extracurricular opportunities that could lead to professional and personal development, these experiences do not appear to be focused, or specifically geared for bright young men and women. As Mirowska (2018) points out, the current university environment aims mainly at providing knowledge rather than developing skills, competence, or full potential of students so that they can make significant contributions to society.

With the current educational focus in Poland on creating linkages between universities and labor markets, and on service in the interest of both science and

society (Dobbins, 2013), this research has pragmatic implications for universities, organizations, and researchers alike. Higher education administrators in Poland might consider exploring honors education in their colleges and universities and pilot it to select talented students. Universities can use the National Center of Research and Development initiative for improving students' competencies as a template for the development of programs geared at talented students. If the National Center of Research and Development or any other public sources of funds are lacking, universities can collaborate with local business partners to develop effectively free curricula, as companies are interested in collaborating to develop highly talented business professionals for their employment pipelines. The implications of such actions could result in lowering the brain drain in Poland and a better-prepared pool of talented professionals. Researchers might delve further into establishing an honors research agenda in Poland, as we pave the way toward a science of honors education (Jones, 2016).

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Biographical notes

Beata Jones – earned a Ph.D. in Computer Science from the City University of New York Graduate Center. She is currently a Professor of Business Information Systems Practice and an Honors Faculty Fellow at the Neeley School of Business, Texas Christian University. She serves as the Chair of the Professional Development Committee at the National Collegiate Honors Council and is an editorial board member of the *Journal of the European Honors Council* and the *Journal of Entrepreneurship, Management, and Innovation*. Her research interests include talent development, honors education, twenty-first-century pedagogy, ePortfolios, and trust, security, and privacy in the Digital Age.

Katarzyna Perez – earned a Ph.D. in Finance from the Poznan University of Economics and Business, Poland, where she works currently as a Professor of Finance. She is a Head of the Monetary Policy and Financial Markets Department and CFA Coordinator at PUEB. She serves as a member of the Program Committee and the International Affairs Committee at the Faculty of Economics. She is also a coordinator of the *Finance Audit Investments* program that offers students participation in Competence Development Project financed by the National Center for Research and Development.

Maarten Hogenstijn – earned a Ph.D. in Human Geography at Utrecht University, the Netherlands. He is currently a senior researcher in the Research Centre Talent Development in Higher Education and Society at Hanze University of Applied Sciences Groningen, where he leads the Honors in Europe research project, as well as the CoTalent Strategic Partnership (Erasmus+ KA2). He is also Secretary of the European Honors Council and coordinating editor of the *Journal of the European Honors Council*. His interests include talent development, transdisciplinary and international cooperation, social entrepreneurship, and open science.