







# “Interest in universities based on search queries on the Internet”

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# INTEREST IN UNIVERSITIES BASED ON SEARCH QUERIES ON THE INTERNET

## Abstract

The improvement of global Internet access and the COVID-19 pandemic, which necessitated mass testing of online teaching methods, have forwarded the competition between higher education institutions from the regional level and the struggle for the rich student into the competition for students in all countries. The paper aims to determine the influence of the rating of higher education institutions on the interest of Internet users by conducting a comparative analysis of the popularity of the official names of higher education institutions in search queries in Ukraine and Poland. To do this, a comparative analysis of the change in the interest in leading higher education institutions in Ukraine and Poland in search queries in the Google search engine is carried out. The analysis is performed using the Google Trends web application. As a result, it is found that a high position of the university in the national ranking does not guarantee more search queries about it on the Internet by both national Internet users and users from the neighboring country. In general, Internet users continue to be most interested in universities located in their region at the time of the search.

## Keywords

university, Internet marketing, Internet platforms, analysis,  
Google Trends web application, comparative analysis

## JEL Classification

M31, O15, O57

## INTRODUCTION

International integration, globalization, and scientific and technological progress are processes that dominate world politics, economy, affect various areas of society, and change all the spheres of human life. It is scientific and technological progress; globalization has contributed to the development and spread of the World Wide Web, which, in turn, has created the conditions for the emergence of new ways of communication between people, business, social sphere, etc. After all, the development of the Internet has opened up new opportunities for the representation of any organization that seeks faster successful development, additional benefits, mutually beneficial cooperation anywhere on the planet, etc. Under such conditions, at the same time, there is a competitive struggle for the number of queries in search engines, likes, subscriptions, reposts, cross-browser, high rankings intensifies. Higher education institutions have not been left out either, as the competitive struggle from the category of competition among one another by a territorial criterion has moved to the global arena. Another important argument, which has increased the level of competition between universities around the world, was the spread of COVID-19, which created the preconditions for the transfer of universities to online learning. The only restriction on the international competition of higher education institutions is the language of teaching. This formed a base for the need to find their way of presenting the university on the Internet, to identify new forms and methods of communication to raise awareness among potential customers of educational and research services.

Today, most universities in the world develop their strategic directions of development, attracting both domestic and foreign highly qualified personnel, open various educational areas, including training of foreign students, or enter into partnership agreements with other foreign universities for student exchange, etc. The popularity of obtaining education in Polish universities by Ukrainians, and by Polish students in other EU countries has become an important confirmation of this fact. In addition, many Ukrainian students enter higher education institutions that have a double degree program and study at Ukrainian and Polish universities in parallel. Thus, educational migration promotes the development of international integration processes, opens new opportunities for residents; however, it increases competition between universities and puts the level of education in the foreground. Therefore, the intensification of competition between universities in the world and within countries encourages them to find ways to improve not only the educational process but also the use of innovative online tools to increase their strengths, enhance their image, and raise interest among prospective applicants (Zharska, 2020).

With each subsequent stage of the development of the Internet, new challenges arise for anything that has the desire to develop and go in tandem with innovation. Thus, improved search engines and their search engine optimization (SEO), which is based on the site analysis, allows raising the rating of the official name in search queries, improving the site and promoting it, increasing the number of potential visitors. SEO directs the development of potential in the right direction, finds new opportunities, and promotes overall development. That is why most HEIs in the world are extremely successful in using this tool in their marketing strategy.

Ukraine and Poland are two independent neighbors of the post-socialist camp. Most of the processes of formation and development take place in the same way and with similar stages. However, in Poland, these processes took place several years earlier. This is partly because Poland had already been an independent state in Europe before the collapse of the socialist bloc and in 2004 became a member of the European Union. This event led to an even greater gap in the economic, social, and public development of the two countries. However, the neighborhood and similar mentality between Ukrainians and Poles allow drawing certain parallels in the organization of the educational process.

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## 1. LITERATURE REVIEW

The turbulent changes of the last two years, which have resulted from the pandemic and the sharp increase in the digitalization of all spheres of society, have caused a real boom in the education sector. The Internet and modern technologies, in general, have opened up many new opportunities in this area. The search for new effective innovative strategies for the development of higher education institutions is being actively pursued. Traditional marketing strategies in the context of digitalization are no longer suitable for attracting new generations of applicants and do not always take into account the specifics of education (Elken, 2019). Brand, reputation, and image are the main issues of higher education marketing (Chapleo & O'Sullivan, 2017).

Based on the modern concept of interaction marketing, which involves building long-term relationships with customers based on an effec-

tive system of cooperation, it is necessary to use modern means of communication: any Internet tools, including Internet marketing tools. Štefko et al. (2015), Shaltoni (2016), Zahirnyak et al. (2020), and Tawfeq and Musa (2020) are engaged in studying the role of Internet marketing and its tools, identifying new trends in Internet marketing, using SEO to succeed in raising the ranking of HEIs, and promoting the site of HEIs. In particular, Iddris (2018) notes that higher education institutions can use SEO as a digital marketing strategy to increase their internationalization.

Improving SEO is extremely important because, according to Johnson (2019), every tenth of potential students uses only Internet resources to explore their university opportunities, and the number of search queries related to education is growing every year. At the same time, Google is the most popular search engine. The reason for this is that organizations use popular and con-

venient search engines to increase their chances of increasing profitability, and many search engines use Google search templates. This is confirmed by other scientists. In particular, Krstić (2020) confirmed that Google prefers its platforms, as universities with a symbiotic presence on all of them have recorded the highest SEO rankings.

However, speaking of university rankings, it should be noted that most higher education institutions in Central and Eastern Europe remain invisible (unrepresented) in the international and European academic world (Boyadjieva, 2017). This, in turn, reduces their competitive attractiveness.

Hrynkevych (2020) indicates that it is beneficial to develop various types of applied models for the analysis of the HE system competitiveness and corresponding sets of indicators that depend on the level of analysis (institutional, regional, national) and stakeholder priorities. A valuable and critical review of the research based on a comparative analysis of the competitiveness of HEIs on the Internet and the works published in Scopus and Web of Science databases was conducted by Khlaisang (2015), who researched and developed the guidelines on the user interface of HEIs and the prototype to evaluate the education service website. This analysis was based on 3 perspectives: technology, pedagogy, and accessibility.

Ng et al. (2020) examined how the information provided on the Internet influences the choice of HEIs by entrants and investigated the marketing tools of influence through online sources. Máñez-Carvajal et al. (2021) found that among the main difficulties that users may face on the sites of HEIs are those related to the perception of information and navigation on the site; another problem is a low level of web-availability on the websites of HEIs of different countries. Vález and Ventura (2020) argue that higher education institutions must apply SEO strategies to increase their popularity more effectively.

Kvitka et al. (2019) based on statistical material of Webometrics ranking of universities offer a two-factor model that allows for quantitative and qualitative analysis and forecasting of trends in the market of educational services and marketing research in this area.

At the same time, Ifenthaler (2017) showed that not all educational institutions are ready to perform analytics, in particular, their search engine rankings. This question is especially interesting in the context of international comparisons, which make it possible to identify certain patterns and differences much more widely and thoroughly. Because of this, there is a need for further study of the peculiarities of Internet users' perception of higher education institutions, both on the example of one and several countries.

## 2. AIM AND METHODS

The paper aims to determine the influence of the rating of higher education institutions on the interest of Internet users by conducting a comparative analysis of the popularity of the official names of higher education institutions in search queries in Ukraine and Poland.

The choice of the Google search portal is determined by its greatest popularity among Internet users compared to analogs. Today, Google is showing an impressive rate of growth in popularity in the world (Marketer, 2019). One of Google's public web applications is the Google Trends platform, which is based on Google search and shows how often a certain term is sought concerning the total volume of search queries in different regions of the world and different languages. Google's algorithms determine a point on the graph for the selected period when the query is most popular, and take it as 100. The rest of the points on the graph are determined as a percentage of the maximum.

Accordingly, based on Google Trends platform, the Top 200 Ukraine 2020 rating, Best private HEIs in Ukraine rating, and Ranking of best Polish universities in 2020 prepared by Perspektywy educational foundation (Osvita UA, n.d.; Eurostudy, n.d.; Google Trends, n.d.), the number of queries made on the twenty HEIs in Ukraine and Poland (five state and five private universities from both countries) in 2006 and 2020 is analyzed and compared. The number of queries by the official name of the HEI in the regions of Ukraine and Poland in 2010-2020 is also compared.

**Table 1.** List of the selected higher education institutions in Ukraine and Poland and their official web pages

Source: Osvita UA (n.d.), Eurostudy (n.d.), Google Trends (n.d.).

No	mode of study	Higher education institution	Abbreviated title	Official web page of the HEI	Year of the registration of the first domain	Year of the registration of the current domain
1	state-funded education	National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"	KPI	<a href="https://www.kpi.ua">https://www.kpi.ua</a>	1999	2008
2		Taras Shevchenko National University of Kyiv	KNU	<a href="http://www.univ.kiev.ua">http://www.univ.kiev.ua</a>	1996	1996
3		Sumy State University	SSU	<a href="https://www.sumdu.edu.ua">https://www.sumdu.edu.ua</a>	1998	2001
4		National Technical University "Kharkiv Polytechnic Institute"	KhPI	<a href="https://www.kpi.kharkov.ua">https://www.kpi.kharkov.ua</a>	1996	1996
5		Lviv Polytechnic National University	LPNU	<a href="https://www.lpnu.ua">https://www.lpnu.ua</a>	1997	2015
6	study-for-fee form of education	University KROK	KROK	<a href="https://www.krok.edu.ua/ua/">https://www.krok.edu.ua/ua/</a>	2001	2014
7		Interregional Academy of Personnel Management	IAPM	<a href="http://fin.maup.com.ua/">http://fin.maup.com.ua/</a>	2013	2013
8		Poltava University of Economics and Trade	PUET	<a href="http://puet.edu.ua/">http://puet.edu.ua/</a>	2006	2013
9		Alfred Nobel University	ANU	<a href="https://duan.edu.ua/">https://duan.edu.ua/</a>	2003	2016
10		Ukrainian Catholic University	UCU	<a href="https://ucu.edu.ua/">https://ucu.edu.ua/</a>	2002	2002
11	state-funded education	Uniwersytet Warszawski	UW	<a href="https://www.uw.edu.pl">https://www.uw.edu.pl</a>	1996	1996
12		Uniwersytet Jagielloński w Krakowie	UJ	<a href="https://www.uj.edu.pl">https://www.uj.edu.pl</a>	1996	1998
13		Politechnika Warszawska	PW	<a href="https://www.pw.edu.pl">https://www.pw.edu.pl</a>	1996	1998
14		Akademia Górniczo-Hutnicza im. Stanisława Staszica w Krakowie	AGH	<a href="https://www.agh.edu.pl">https://www.agh.edu.pl</a>	1997	1997
15		Uniwersytet im. Adama Mickiewicza w Poznaniu	UAM	<a href="https://amu.edu.pl">https://amu.edu.pl</a>	1997	1997
16	study-for-fee form of education	Akademia Leona Koźmińskiego	ALK	<a href="https://www.kozminski.edu.pl">https://www.kozminski.edu.pl</a>	2003	2003
17		SWPS Uniwersytetu Humanistycznospołecznego	SWPS	<a href="https://swps.pl">https://swps.pl</a>	2008	2008
18		Uczelnia Łazarskiego w Warszawie	UL	<a href="https://www.lazarski.pl">https://www.lazarski.pl</a>	2003	2003
19		Collegium Civitas w Warszawie	CCW	<a href="https://www.civitas.edu.pl">https://www.civitas.edu.pl</a>	2005	2005
20		Akademia Wyższa Szkoła Biznesu w Dąbrowie Górniczej	WSB	<a href="https://wsb.edu.pl">https://wsb.edu.pl</a>	1999	1999

Ukrainian and Polish universities were divided into two groups of HEIs, five in each according to the rating (the first five are state universities and the second five are private universities) (Table 1). The analysis took into account the possible change of the name of the higher education institution and its web domain.

Thus, the study develops the following hypotheses:

*H1: The higher the ranking of the university, the higher the number of search queries.*

*H2: Internet users are most interested in the universities that are located next to them at the time of the search.*

*H3: The higher the ranking of the university, the higher the level of interest in the neighboring country.*

### 3. RESULTS AND DISCUSSION

An important piece of output information is the date of registration of the first domain because it is since this time that the university has become available to Internet users and allowed receiving information to a wide range of applicants, which made sense to enter search queries to obtain information directly from the university. This date also indicates when the university management realized the need to communicate with internal and external audiences via the Internet. Of course, the speed of dissemina-



tion of the information about universities, curricula, scholarships, opportunities, and living conditions in dormitories is much faster, fuller, and cheaper via the Internet than through printed flyers, television commercials, banners, etc. So, analyzing the date of registration of the first and current domain of HEIs in Ukraine, their difference can be seen – in most universities, this is because during this period they changed their status, for example from “state” to “national”, introduced new Internet standards, adapted their sites to mobile versions, etc. In general, only three Ukrainian universities, such as KNU, KhPI, and UCU, created their domain at the beginning of joining the Internet, which has not been changed until now. In contrast, for example, LPNU changed its domain three times: in 1997 it was located at polynet.lviv.ua, in 2003 it changed to lp.edu.ua, and in 2015 it received its current address lpnu.ua. As for Polish universities, the opposite trend prevails here – all the universities, except UJ and PW, have not changed their domains since the beginning of their website. However, these universities (UJ and PW) only added an identified unified World Wide Web index to the existing domain two years later.

Table 2 presents the results of the analysis of the number of queries in Ukraine for the period from 2006 to 2020. The indicator on the scale of 100% (maximum value) indicates the peak of popularity of the term, twice less popularity is at 50%, respectively, and a zero mark means that during the analyzed period there were not enough data about this term or they were at a very low level (Google Trends, n.d.).

The low average number of queries in 2006 compared to the other years was quite predictable. That can be explained by the fact that initially, the web pages of universities did not contain much new information. The general tendency of growth of the number of Internet users and an increase in the intensity of the use of Internet resources to obtain required information, the development of technical capabilities of servers and networks, stimulated organizations, including universities, to develop their sites. Thus, in 2019, 22.96 million Ukrainians used the Internet, which is 71% (all Ukraine without the Autonomous Republic of Crimea and the occupied territories of Ukraine, age 15+), compared to 2006, when this figure was 18% (from the population of Ukraine) (Ukrinform, 2019). As it can be seen, the number of Internet users has quadrupled in the last fourteen years. Thus, the insignificant level of interest in HEIs on the Internet can be explained by the fact that at that time the population received information about higher education institutions from television, radio, printed booklets, etc. After all, the development of the Internet and related search engines has allowed not only to collect information but also to compare it with each other. For HEIs, it is an opportunity to present their strengths, compare their curricula, get acquainted with the achievements of other universities, and see their position among the universities of the whole country and the world.

The largest increase in percentage points among Ukrainian state-owned universities is demon-

**Table 2.** Analysis of the relative number of queries under the official names of HEIS in Ukraine from 2006 to 2020 on Google platform, %

Source: Google Trends (n.d.).

HEI	Average indicators of search queries					Deviation				
						2010 to 2006	2018 to 2010	2019 to 2018	2020 to 2019	2020 to 2006
	2006	2010	2018	2019	2020					
KPI	20	30	40	43	45	10	10	3	2	25
KNU	23	26	24	26	30	3	-2	2	4	7
SSU	1	3	9	9	14	2	6	0	5	13
KhPI	4	6	8	9	11	2	2	1	2	7
LPNU	8	18	31	29	36	10	13	-2	7	28
KROK	3	16	20	18	13	13	4	-2	-5	10
IAPM	26	31	33	39	34	5	2	6	-5	8
PUET	1	7	33	32	23	6	26	-1	-9	22
ANU	0	10	14	16	12	10	4	2	-4	12
UCU	1	15	42	40	33	14	27	-2	-7	32

Note: The information presented is as of March 14, 2021.

strated by the number of queries regarding LPNU. Thus, LPNU managed to overtake the most popular place. It is important to note that state universities are positioned higher in all national and international rankings of Ukrainian universities. However, the popularity of queries on the highest-rated private universities in Ukraine remains high: by this indicator, in the top five, there are 2 private universities and 3 state ones. As for private universities, a significant increase in queries was observed at PUET and UCU. It was only in the “Covid” year of 2020 when the interest in private universities dropped significantly, which could be attributed to declining the income of the population and their unwillingness to pay for tuition at that time.

The trend of the queries on HEIs in Poland, where a group of state universities took the leading position in 2006, turned out to be interesting (Table 3). The exception is SWPS, which is almost twice ahead of the number of queries on private universities and even is ahead of the leader among state institutions – UW. However, the trend of the predominance of interest in state universities remained in Poland until 2020. As for private HEIs, UL and CCW show a tendency to reduce interest in them. ALK holds a stable position with slight fluctuations, in WSB there are constant fluctuations, the nature of which must be investigated separately.

In general, it can be argued that there is no clear correlation between the university’s ranking and

the number of queries on it in the Google search engine. It can be said that there is more interest in state universities compared to private ones in Ukraine and Poland.

It is interesting to note that in Ukraine and Poland from 2018 to 2019 there was a decrease in the interest in HEIs in search queries. A possible reason for this was the declining birth rate in both countries. As the age of entrants is 17-18 years, the year of their birth was 2001–2002. Thus, in Ukraine from 1999 to 2002 the birth rate was 7.8 people per 1,000 of the population (for comparison, in 1990 – 12.6, and in 2005 – 9). In Poland, the birth rate in 2002 was 9.2 people per 1,000 population (for comparison, in 1990 – 14.3, and in 2005 – 9.4) (State Statistics Service in Ukraine, n.d.b). There was an increase in the demand for KNU and IAPM, which may have been due to effective advertising and the successful choice of areas of student training, etc.

It is also worth conducting a comparative analysis of the number of Internet users in Ukraine and Poland. According to the data of the year 2014, in Ukraine, their number was 43.4% and Ukraine ranked 31<sup>st</sup> out of 201 countries, at this time Poland ranked 24<sup>th</sup>, which was 66.6% of all the users (Internet Live Stats, 2014) throughout the country. To compare and track the dynamics of Internet users, the data on their number in 2016 is presented (Internet Live Stats, 2016), when Ukraine dropped 3 positions to the bottom, being in the 34<sup>th</sup> position with 44.1%, respectively,

**Table 3.** Analysis of the relative number of official queries in Poland from 2006 to 2020 on Google platform, % of max value

Source: Google Trends (n.d.).

HEI	Average indicators of search queries					Deviation				
						2010 to 2006	2018 to 2010	2019 to 2018	2020 to 2019	2020 to 2006
	2006	2010	2018	2019	2020					
UW	35	39	53	48	42	4	14	-5	-6	7
UJ	22	36	42	38	41	14	6	-4	3	19
PW	23	22	36	32	29	-1	14	-4	-3	6
AGH	10	20	42	37	39	10	22	-5	2	29
UAM	24	22	45	40	39	-2	23	-5	-1	15
ALK	21	24	22	20	22	3	-2	-2	2	1
SWPS	43	58	59	53	58	15	1	-6	5	15
UL	16	14	13	11	12	-2	-1	-2	1	-4
CCW	7	6	4	4	5	-1	-2	0	1	-2
WSB	8	12	15	13	18	4	3	-2	5	10

Poland – 26<sup>th</sup> position, which was 72.4%. As it can be seen, the trend for two years indicates that the population of Poland is joining the Internet faster than Ukrainians. This explains the lower number of queries about HEIs in Ukraine compared to the queries in Poland.

Based on the analysis of queries at Ukrainian and Polish universities, it is certainly predictable that in 2006 the level of queries in Ukraine and Poland differed significantly (by half), as at that time the level of coverage of the two countries was at different stages. However, since 2010, this gap has narrowed significantly and the difference has become slight.

An important point in the analysis of market opportunities of HEIs is to determine the target au-

dience of the university. Table 4 and Table 5 present the comparison of the popularity of the official name of HEIs in the oblasts of Ukraine and the provinces (województwo) of Poland. The analysis of this information allows determining the target groups of entrants and tracking their queries in oblasts or provinces, which will allow HEIs to model and adjust the overall marketing strategy to promote their services. In both countries, it is a territorial feature that the preferences of the population in various parts of the state differ significantly. This can be explained by the influence of neighboring countries on the worldview of the population, especially in border areas. Thus, this is important information for HEIs, which must be used to meet the needs of potential consumers of their educational services. The uniqueness of the

**Table 4.** Comparison of the number of queries in the Google search system by the official name of HEIs in the oblasts of Ukraine in 2010 and 2020

Source: Google Trends (n.d.).

HEI	Popularity of the official HEI's page in ranked order			
	in 2010		in 2020	
	city, oblast	%	city, oblast	%
National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"	the city of Sevastopol	100	the city of Sevastopol	100
	Kyiv	75	Kyiv	61
	Kherson	75	the city of Kyiv	58
Taras Shevchenko National University of Kyiv	Zhytomyr	100	Odesa	47
	Chernivtsi	100	Mykolaiv	45
	Crimea	100	Vinnitsia	43
Sumy State University	Sumy	63	Sumy	90
	Luhansk	50	Chernihiv	16
	Chernihiv	25	Poltava	6
National Technical University "Kharkiv Polytechnic Institute"	Kharkiv	71	Kharkiv	86
	Luhansk	50	Luhansk	41
	Zaporizhzhia	15	Donetsk	37
Lviv Polytechnic National University	Khmelnysk	100	Lviv	94
	Lviv	81	Ivano-Frankivsk	67
	Zaporizhzhia	39	Ternopil	65
University KROK, Kyiv	Zhytomyr	50	Chernivtsi	37
	Kharkiv	50	Kyiv	34
	the city of Kyiv	28	Vinnitsia	25
Interregional Academy of Personnel Management	Cherkasy	100	Luhansk	90
	Donetsk	75	Zhytomyr	70
	the city of Kyiv	56	Chernihiv	69
Poltava University of Economics and Trade	Poltava	80	Poltava	91
	Zhytomyr	50	Sumy	50
	Dnipropetrovsk	25	Kherson	40
Alfred Nobel University	Dnipropetrovsk	50	Dnipropetrovsk	73
	Donetsk	25	Zaporizhzhia	35
	the city of Kyiv	1	Donetsk	8
Ukrainian Catholic University	Ternopil	100	Lviv	93
	Zaporizhzhia	100	Rivne	90
	Lviv	77	Ivano-Frankivsk	83

Note: The information presented is as of December 2020.



formed table is that it reflects the interest of potential entrants in the dynamics. In general, the analysis on the Google Trends web application was conducted in 25 oblasts of Ukraine and two large cities. As for Poland, the analysis was carried out in 16 provinces. The analysis data are presented in a ranked order and three areas in which the interest rating in this term is the highest are selected (Table 4).

Analyzing Table 4, it can be argued that *H2* is asserted: the territorial affiliation of Internet users significantly affects the interest in a particular university. The reason for this may not be the desire of parents or children to go to study in other regions if there is a university in their oblast that meets all the previously set criteria. To confirm this, it can be observed that in each university, private or state, in the top three there is an area where the university is located, except for KNU. In the case of IAPM, it should be noted that this is a private university, which has one of the most extensive networks of branches throughout Ukraine, so those interested have the opportunity to study in their oblast or the neighborhood. The reason for the higher interest in KNU in other areas may be explained by the location of this university in the capital of Ukraine. It should also be noted that the central regions and the annexed territory of Crimea showed their interest in KPI and KNU, both in 2010 and in 2020. The changes in the preferences of the eastern and central regions have not changed, remaining true to KhPI, the universities located in Kyiv attract the center and east of Ukraine, and LPNU attracts the western regions. As for private universities, there are the same trends, but in part, the contingent of popularity is changing in the other areas. The decline in the interest of the population of the eastern regions in universities located in the western part of the country has become quite predictable. Thus, Zaporizhzhia region in 2010 with the level of 100% of views of the Catholic University website and 39% of Lviv Polytechnic, unfortunately, did not maintain its trend in 2020 – this is due to the hostilities in eastern Ukraine, which negatively affects the ability to train applicants from these and contiguous territories in HEIs of the other regions. In general, these trends, namely territorial affiliation and military action, have made their adjustments in the choice of educa-

tional institutions and formed the demand of the population for education in universities that are located near the place of residence.

A similar analysis is conducted in the provinces of Poland (Table 5).

After analyzing Table 5, it is established that the trends in the choice of the place of study in Poland are identical to those in Ukraine, i.e. by the territorial criterion. Accordingly, *H2* is confirmed for Poland as well. Most of the queries that were recorded at the address of the official website of HEIs are from the regions bordering directly on the HEI. Examples include AGH and UJ, which are located in Krakow (Lesser Poland województwo), which borders directly on Silesia, Subcarpathia, and Holy Cross Province. This trend remained throughout the study period, with a slightly different order in the structure and with little deviations, and sometimes with a change of the province, which is located nearby. However, it should be noted that the area of Ukraine is 603,548 km<sup>2</sup> (State Statistics Service in Ukraine, n.d.b) with the population of 42.2 million, which does not include the population of the temporarily occupied territory of the Autonomous Republic of Crimea and the city of Sevastopol, and Poland, with an area of 312,679 km<sup>2</sup> with the population of 38.5 million people. It is obvious that the territory of Ukraine is twice as large, but the population is almost the same. Thus, Ukrainians cover a greater distance when choosing an educational institution and this introduces certain special features, both in Ukraine and Poland.

To test *H3*, the popularity of queries by the official name of HEIs in Ukraine and Poland in 2010 and 2020 (in Ukrainian and Polish, respectively) in the neighboring country is compared (Table 6).

Table 6 shows the level of popularity of certain Polish universities on the part of Ukraine and Ukrainian HEIs on the part of Poland in 2010 and 2020. Among Ukrainian state universities, the most popular in Poland was and still is LPNU, which ranks 5<sup>th</sup> among state universities. In general, the trend shows the popularity of LPNU among applicants and the interest of potential partners from Polish universities to conduct research and

educational activity in 2010 and 2020. The reason for this interest on the part of Poles can be considered the high world rating of this university (BBC News Ukraine, 2020), common historical past, and border location. The first two ranked universities (KPI and KNU) are also of some interest in Poland. The changelessness and at the same time the lack of interest of Poles in the two leading Ukrainian universities (KhPI and SSU) are interesting trends. The reason for this may be the territorial remoteness of these universities from the borders with Poland. In addition, there is an obvious lack of interest in private Ukrainian universities, both in 2010 and in 2020, except for UCU,

which in 2010 received the maximum number of queries from Poles.

In addition, it is worth noting that Internet users from Ukraine did not show their interest in Polish private HEIs in 2010. However, in 2020 the situation changed. Given the steady increase in Ukrainian students in Poland, it can be assumed that they are now equally interested in both state and private universities.

In general, there is no clear relationship between the national rating of the university and its popularity in the neighboring country.

**Table 5.** Comparison of the number of queries in the Google search system by the official name of HEIs in the provinces in Poland in 2010 and 2020

Source: Google Trends (n.d.).

HEI	Popularity of the official HEI's page in ranked order			
	in 2010		in 2020	
	provinces	%	provinces	%
Uniwersytet Warszawski	Lower Silesia	46	Masovia	52
	Masovia	41	Podlaskie vojeyvodstvo	39
	Podlaskie	35	Warmia-Masuria	36
Uniwersytet Jagielloński w Krakowie	Lesser Poland	56	Lesser Poland	48
	Holy Cross	42	Silesia	35
	Province	41	Opole	33
Politechnika Warszawska	Podlaskie Warmia	28	Masovia	35
	Masuria	23	Lublin	30
	Subcarpathia	21	Podlaskie	29
Akademia Górniczo-Hutnicza im. Stanisława Staszica w Krakowie	Lesser Poland	37	Lesser Poland	47
	Silesia	25	Subcarpathia	47
	Subcarpathia	24	Silesia	34
Uniwersytet im. Adama Mickiewicza w Poznaniu	Greater Poland	71	Greater Poland	87
	Lubusz	67	Lubusz	65
	West Pomerania	50	West Pomerania	49
Akademia Leona Koźmińskiego	Lublin	34	Subcarpathia	41
	Podlaskie	33	Holy Cross Province	35
	Subcarpathia	27	Lublin	31
SWPS Uniwersytetu Humanistycznospołecznego	Lubusz	100	Lower Silesia	84
	West Pomerania	80	Lubusz	83
	Pomerania	79	Pomerania	77
Uczelnia Łazarskiego w Warszawie	Opole	67	Masovia	17
	Lublin	22	Łódź	16
	Łódź	21	Podlaskie	15
Collegium Civitas w Warszawie	Podlaskie	16	Lublin	11
	Lesser Poland	9	Masovia	7
	West Pomerania	8	Subcarpathia	6
Akademia Wyższa Szkoła Biznesu w Dąbrowie Górniczej	Silesia	58	Silesia	69
	Lesser Poland	37	Lesser Poland	46
	Holy Cross Province	17	Opole	15

Note: The information presented is as of January 2021.

**Table 6.** Comparison of the popularity of the official term of HEIs in Ukraine and Poland in the Google search system in 2010 and 2020

Source: Google Trends (n.d.).

№	HEI	Popularity of the HEI on the part of country, %	
		2010	2020
<b>Poland</b>			
1	KPI	29	33
2	KNU	22	13
3	SSU	0	0
4	KhPI	0	0
5	LPNU	49	54
	Total	100	100
6	KROK	0	0
7	IAPM	0	0
8	PUET	0	0
9	ANU	0	0
10	UCU	100	0
	Total	100	–
<b>Ukraine</b>			
11	UW	34	20
12	UJ	33	51
13	PW	20	7
14	AGH	0	7
15	UAM	13	15
	Total	100	100
16	ALK	0	23
17	SWPS	0	36
18	UL	0	13
19	CCW	0	23
20	WSB	0	5
	Total	no data	100

Note: The information presented is as of January 2021.

## CONCLUSION

Due to the spread of the Internet to more areas, the increase in its speed, the increase in the number of users, the convenience and speed of information, most of the human accents have changed, more actively and more often using the means of Internet communications. In particular, this is facilitated by the global pandemic of COVID-19, which has significantly affected the organization of the educational process, and especially the dissemination and gaining experience of online learning, which has simplified access to learning and has allowed developing appropriate online curricula, thus increasing competition among universities in the market of educational services. All this was reflected in the number of queries for information by official names of leading universities in Ukraine and Poland.

However, this study does not confirm *H1*: the higher the ranking of the university, the higher the number of search queries, and *H3*: the higher the ranking of the university, the higher the level of interest in the neighboring country. It can be argued that there is more interest in state universities compared to private ones in Ukraine and Poland.

At the same time, *H2* is confirmed: despite the physical accessibility of the educational offer of universities around the world, Internet users continue to show the greatest interest in universities located in their region at the time of the search.

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