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# Wikipedia Users in the Light of International Research – Practical Implications

**Abstract:** Innovations, new technological solutions by means of which users have constant access to information from all over the world, are continuously influencing the way people live. A very important moment in the development of using the Internet was the appearance of the first social media. One of the first and most widely known is Wikipedia, described as the Internet encyclopaedia.

The aim of the article is to identify the ways of using Wikipedia by individual users in various foreign countries, with respect to the characteristics such as age, gender and education. The analysis of the literature has been complemented with the results of the empirical study that was conducted in several countries (China, Germany, India, Poland, Russia, Spain, the United States and Turkey). The analysis of the empirical data showed significant differentiation of the influence of the studied determinants on the ways of using the Wikipedia resources. In the majority of the studied groups gender was the most differentiating determinant.

**Key words:** Wikipedia, users` determinants, intercultural research, implications

## Introduction

The development of new technologies influences the way and quality of life of market operators, both individual and institutional ones. Growing Internet access is especially significant in markets all over the world. It is related to quick access to information, possibility to communicate even with people who live in remote places. The breakthrough in the growth of the Internet was the appearance of social media which constitute a group of diversified tools enabling users to communicate as well as share and gain information from various areas of knowledge (Xiao and Askin, 2014). One of the best known social networking services is Wikipedia. The categories of information placed there belong to nearly all fields, starting from biographies of famous people from the world of science, politics, religion etc., through main theories and scientific issues, and ending in interesting facts about the world (Thompson, 2016). Wikipedia is a service used by many people all over the world. Young people very often treat it as the first source of information, people who are older use it to enrich their knowledge in particular fields, it is used by men and women, students and pupils. The author of the article posed a question whether the areas of using Wikipedia and the characteristics of Wikipedia users are the same in various foreign markets.

The aim of the article is to identify the ways of using Wikipedia by individual users in various foreign countries in relation to their age, gender and education. The analysis of the literature has been complemented with the results of the empirical study that was conducted in several countries. In the literature on the subject there are only few papers presenting the use of Wikipedia in regards to gender, age and the level of education of the users in cross-cultural comparison. This article is an attempt to complement the literature in the discussed area of knowledge.

The structure of the article includes the literature overview in the discussed area, methodology of the empirical study, its results, as well as conclusions and implications.

## Literature overview

Among the many tools related to the rapid growth of the Internet wikis, that are platforms allowing users to co-create the content of Internet websites need to be distinguished (Xiao and Askin, 2014). They are platforms which enable users to add or edit articles about a particular subject. These texts can be read by other people, for whom they are often one of the first sources of information on a given subject. Wikis are created by the systems which are easily available and free of charge. At any time users can browse the history of a webpage and edit already published content. The wiki platforms are based on cooperation and trust. It is worth highlighting that the content is controlled in order to prevent offensive elements which cannot be published. They are online encyclopaedias among which Wikipedia should be distinguished. All internet users have access to the information in Wikipedia, the so-called free encyclopaedia, however only registered users can edit it. Kaplan and Haenlein (2010) call this group of media collaborative projects.

The statistics presenting the number of people using Wikipedia resources worldwide and the number of articles presented there prove the importance of this source. One of the recent updates estimates the number of Wikipedia users as 22.3 million of active users, and 0.5% of which are active editors, that is people who introduce new information to Wikipedia resources or complement already existing ones (Smith, 2016). Most of the material presented on Wikipedia web pages is in English (the second most popular language is Swedish), however the statistics show that the Wikipedia content can be presented in around 280 languages (Smith, 2016). This data indicates great significance of this source of information in the times when new technologies develop, the time and process of looking for information shorten. In spite of the fact that Wikipedia has not only supporters but there is also a great number of its opponents, certainly its importance will not decrease (Thompson, 2016). It is caused by moving various activities from the

offline world to its online equivalent. Nowadays, many everyday activities related to communication, buying decisions or looking for information take place online. Mobile activity of users which makes it possible to apply the Internet tools more often is also of particular importance.

Achieving the main aim of the article is based at the first stage on formulating the research questions referring to the area of the study. The following questions need to be answered: What information is most often searched by the users in the Wikipedia resources? Are these materials essential for work, studying, or entertainment? What are the characteristics of Wikipedia users? Do the ways of using Wikipedia and the characteristics of Wikipedia users differ among the countries? The author has tried to find the answers to these research questions in the literary studies as well as the empirical study that was conducted in several different markets.

The scholarly literature on using Wikipedia resources and the characteristics of users is quite modest as many scholars are sceptic about such compilations of information that can be edited by various people (Korfias, Poulos and Bokos, 2006; West and Williamson, 2009; Knight and Pryke, 2012). The studies on Wikipedia users show that to the great extent these people are young, still studying and using Wikipedia resources for studying purposes (Lim, 2009; Colon-Aguirre and Fleming-May, 2012; Todorinova, 2015). In the research on students Mizrachi and Bates (2013) showed that digital sources complement the information gained from other library resources. Colon-Aguirre and Fleming-May (2012) distinguished three groups of students using different sources of information – users of libraries and rental stores: avid, occasional and avoiders. Avid users start the process of looking for studying material from browsing the websites of libraries, prefer library resources to Google or Wikipedia (Wexelbaum, 2012). They consider them more valuable than Internet resources. Occasional users complement library resources with the information obtained on the Internet. On the other hand, avoiders start the process of looking for information from browsing the resources of e.g. Wikipedia or Google.

There are not many papers on the influence of gender on using Wikipedia. The results of the papers published by some of the researchers show the differences between genders in relation to the ways of using the Internet. It turns out that women more often use the Internet to communicate (via email, Internet forums or social media), establish and maintain relationships, and for educational purposes, while men more often search for information about current events (Ruleman, 2012, Joiner et al., 2012; Chan et al., 2015). Moreover, men more often than women use the Internet for entertainment, playing games and as a way of spending free time (Muscanell & Guadagno, 2012; Joiner et al., 2012; Chan et al., 2015).

The analysis of the literary sources in the above area enabled formulation of the main research theses (T) and working hypotheses (H) referring to the interdependence between age, education and gender, and the ways of using Wikipedia.

**T1:** Age differentiates the way of using Wikipedia resources.

H1a: *Younger users (= <30 years) more often use the Wikipedia resources for studying purposes than people who are older (>30 years).*

H1b: *Older users of Wikipedia (>30 years) are more often its editors than younger ones.*

**T2:** The level of education differentiates the way of using Wikipedia resources.

H2a: *Pupils and undergraduates (Bachelor and Master) more often use Wikipedia for studying purposes than professionally active people.*

H2b: *Master's students and professionally active postgraduates are more often editors of Wikipedia than pupils and Bachelor's students.*

**T3:** Gender differentiates the way of using Wikipedia resources.

H3a: *Women more often use its resources for studying purposes, while men for looking up interesting facts.*

H3b: *Men are more often editors of Wikipedia than women.*

## Methodology

The aim of the empirical study presented in this article was to identify the ways of using Wikipedia by the users from different international countries, taking particularly into account gender, age and education level as differentiating criteria. Considering the main aim of the research the following research question has been formulated: are there any differences between genders, age and education level in the ways of using Wikipedia? The hypotheses formulated in the previous part of the article are the answers to that question.

### *Measurement development*

In the empirical study the author used a research method which was a distributed questionnaire (filled out single-handedly by the respondents) in two versions: paper and electronic. The standardized measurement instrument applied in it was a questionnaire which is an original instrument prepared for the purpose of the described research. The only element differentiating the measurement instrument in the researched markets was the language. In order to gather a greater number of filled-out questionnaires the Polish language was applied in Poland, Chinese in China, Turkish in Turkey, Russian in Russia, Spanish in Spain, and English in the rest of the markets. The original language of the questionnaire was Polish, next it was translated into English, Spanish, Chinese, Turkish and Russian by means of forward and backward translation. It was based on translating the questionnaire from Polish into particular languages, and next into Polish again. The original version was compared with the final one in order to eliminate errors stemming from linguistic, lexical or context differences (Craig and Douglas, 2006).

### *Data collection*

A significant part of the empirical data was gathered in 2015, however, the process of collecting the data was finally ended at the end of 2016 in China, Spain, India, Germany, Poland, Russia, the United States and Turkey. The total number of the respondents amounted to 1656, including 295

from China, 130 from Spain, 63 from India, 117 from Germany, 296 from Poland, 100 from Russia, 395 from Turkey, 260 from the United States. The respondents were selected by purposive sampling. In each market there were people designated to distribute the questionnaires among the respondents. The questionnaires were either electronic or paper. Applying the online questionnaire did not result in a significant response rate (3.5% of all the collected questionnaires).

One of the research limitations was a discrepancy in the size among groups. They are caused by difficulties in collecting the data in particular markets which, in turn, were largely related to cultural differences. The differences in size among the groups and the applied sampling method affect the consequences related to the interpretation of the obtained results which, in the discussed case, should not be fully generalized for the population of the researched countries, Wikipedia users.

## Results

### *Respondents` profile*

The respondents of the research in particular countries were people who agreed to participate and express their opinion on how they use Wikipedia. The respondents participating in the study were of different age, and three age groups were distinguished, i.e. 15–20, 21–31, 31 and more (Table 1). In China, India, Germany, Poland and Turkey the respondents from the age group of 21–30 predominate. Similarly, in Spain this age group predominated, however here a comparable number of the respondents aged 15–20 was noted. On the other hand, in the United States the largest number of the respondents was observed in the 15–20 age group. In Russia there were similar amounts of respondents within both groups. Taking into account the number of the respondents in the age groups it can be stated that in the studied cultural groups the representatives of the so-called gen-

eration Y predominate. The fewest respondents were observed in the age group of 31 and more.

**Table 1. Characteristics of the respondents by age, gender and education level in relation to the country of origin (%)**

Characteristics	China	Spain	India	Germany	Poland	Russia	United States	Turkey
Gender								
Women	68.1	50.8	22.2	50.4	70.9	67.0	56.5	48.7
Men	31.2	49.2	77.8	49.6	27.7	33.0	43.1	49.7
No data	0.7	0.0	0.0	0.0	1.3	0.0	0.4	1.5
Age								
15–20	14.2	40.8	11.1	14.5	35.5	49.0	79.6	9.6
21–30	66.4	50.8	79.4	82.9	63.5	48.0	16.9	76.5
31 years and more	19	0.0	9.5	2.6	0.7	3.0	3.5	13.4
No data	0.3	8.5	0.0	0.0	0.3	0.0	0.0	0.5
Education level								
Pupil	17.3	0.8	6.45	3.4	4.4	1.0	33.1	0.0
Bachelor degree	27.8	95.4	22.58	50.8	78.9	72.0	58.5	78.06
Master degree	42.0	3.1	50.0	42.2	16.3	13.0	5.8	7.65
Postgraduate – professionally active	11.8	0.77	20.9	3.45	0.34	14.0	2.69	14.3

**Source: own research.**

Taking into account the differentiation of the studied group in terms of gender (Table 1) it needs to be emphasized that in many studied groups it cannot be unambiguously stated which gender predominates. In the Spanish, German, American and Turkish group gender parity was nearly set. The predominance of women was observed in the Chinese, Polish and Russian groups, while in the Indian group the predominance of men was noted.

Analysing the respondents in relation to the level of education it should be emphasized that in almost all researched countries young people, pupils, undergraduates and graduates predominate. The largest group clas-



sified as “pupil” was observed in the United States (33.1%), which is also correlated to its structure in terms of age. The country where a significant number of participants were also pupils was China (17.3%). On the other hand, in Spain (95.4%), Poland (78.9%), Turkey (78.06%) and Russia (72.0%) undergraduate students predominated, while in China, graduate students formed the largest percentage group (42.0%). In Germany there were almost equal groups of undergraduate and graduate students.

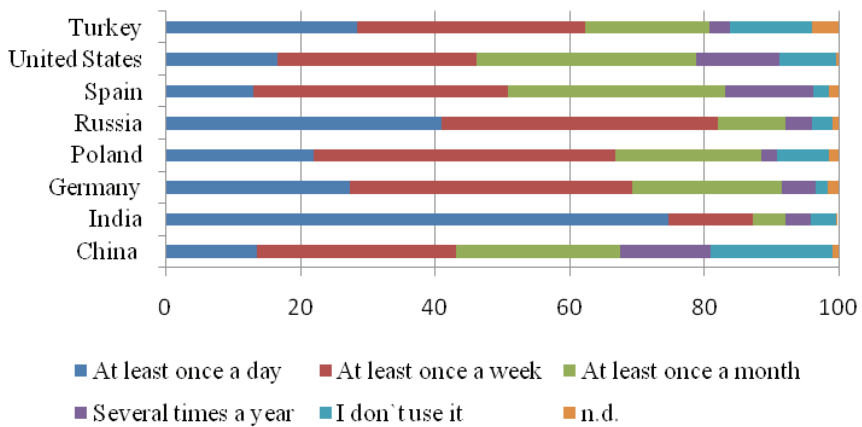
#### *Area and determinants of using Wikipedia*

In order to identify the frequency of using Wikipedia the analysis of the indicators of the structure of the respondents who use it on everyday basis has been conducted; at least once a week, at least once a month; several times a year or do not use Wikipedia at all. Secondly, the analysis of statistical indicators demonstrating the interdependence or its lack between the criterion of gender, age, education level and the distinguished activities in the area of using Wikipedia was performed. In order to identify these activities the respondents were asked to determine the frequency of performing particular activities (**very often, often, from time to time, rarely, very rarely, never**). In order to determine the significance of differences between gender, age and education level of the respondents in particular countries and the ways of using Wikipedia Pearson’s chi-square statistics was applied. On the other hand, in order to establish the strength of the correlation between age, gender and education level and the indicated behaviours Cramer’s **V** factor was applied. Using the distinguished statistics stems from the features of scales of measure applied in the questionnaire. The results obtained in particular countries are presented in Table 2.

In the first part of the study the respondents were asked to indicate the frequency of using Wikipedia (Figure 1). It stems from the data collected among the respondents that the largest number of people who use Wikipedia resources most often (at least once day) can be found in the Indian group where 74.6% of the respondents stated that they visit this website

at least once a day. High frequency of using Wikipedia was also observed in the Russian, German, Turkish and Polish groups. Slightly fewer respondents indicated a frequent use of Wikipedia in the Spanish and American groups. On the other hand, the largest number of people who do not use this service at all was noted in the Chinese group.

**Figure 1. Frequency of using Wikipedia among the researched respondents**



*n.d.* – no data

**Source: own research.**

In order to identify the ways of using Wikipedia a trial measurement was performed, which made it possible to distinguish the most often activities of individual users. The below discussion focuses only on the selected and the most common aspects regarding to Wikipedia use which were identified during first and trial measurement. In the next part the author presents interdependencies between internal factors (age, education level and age) and Wikipedia activities:

- looking for work-related information (W1),
- looking for education-related information and study materials (W2),

- looking up interesting facts (W3),
- placing the missing information – occasionally being an editor (W4),
- correcting the information already placed in Wikipedia (W5).

Taking into account the significance of the results obtained by means of Pearson's chi-square statistics in relation to age, education level, gender and the way of using Wikipedia, the ones where statistical significance reached  $p < 0.05$  were analysed and discussed in detail. In these cases the aforementioned determinants are statistically significant in terms of the ways of using Wikipedia. The statistics of Chi-square test and the Cramer's  $V$  factor which are presented in the table 2 show that there are differences between the researched countries in relation to the correlation between age, education level, gender and the way of using Wikipedia.

Table 2. Correlations between age, education level, gender and the way of using Wikipedia

	China		India		Germany		Poland		Russia		Spain		United States		Turkey	
	$\chi^2$	V	$\chi^2$	V	$\chi^2$	V	$\chi^2$	V	$\chi^2$	V	$\chi^2$	V	$\chi^2$	V	$\chi^2$	V
<b>AGE</b>																
W1	<b>23.3*</b>	<b>0.22</b>	6.6	0.25	5.9	0.16	14.5	0.16	10.4	0.23	3.4	0.17	<b>27.9*</b>	<b>0.24</b>	<b>20.7*</b>	<b>0.17</b>
W2	<b>17.1**</b>	<b>0.19</b>	5.03	0.2	<b>23.1*</b>	<b>0.32</b>	7.8	0.11	<b>23.1*</b>	<b>0.34</b>	8.9	0.27	11.9	0.15	<b>30.2*</b>	<b>0.21</b>
W3	9.8	0.14	12.04	0.32	7.6	0.18	11.5	0.14	9.1	0.21	6.5	0.23	11.9	0.15	<b>19.23*</b>	0.17
W4	5.2	0.1	5.1	0.22	<b>27.7*</b>	<b>0.35</b>	3.7	0.1	7.4	0.19	3.3	0.17	11.2	0.15	<b>18.3**</b>	<b>0.17</b>
W5	7.5	0.13	12.08	0.37	7.2	0.18	4.8	0.1	10.0	0.23	4.4	0.19	13.1	0.16	<b>21.7*</b>	<b>0.19</b>
<b>EDUCATION LEVEL</b>																
W1	28.7	0.17	13.7	0.25	15.6	0.21	10.9	0.12	20.9	0.23	16.9	0.21	14.2	0.14	<b>46.8*</b>	<b>0.22</b>
W2	27.9	0.17	20.5	0.3	18.8	0.23	10.15	0.12	<b>81.9*</b>	<b>0.46</b>	13.5	0.18	<b>32.9*</b>	<b>0.21</b>	<b>54.5*</b>	<b>0.23</b>
W3	21.3	0.15	19.8	0.3	18.9	0.23	14.6	0.13	<b>36.7*</b>	<b>0.3</b>	11.8	0.17	19.8	0.16	<b>35.6*</b>	<b>0.18</b>
W4	16.6	0.13	16.5	0.28	<b>30.8*</b>	<b>0.3</b>	17.5	0.14	<b>59.3*</b>	<b>0.4</b>	6.2	0.13	13.5	0.13	16.2	0.13
W5	14.5	0.12	21.1	0.34	18.7	0.23	9.9	0.11	<b>40.8*</b>	<b>0.33</b>	4.1	0.1	10.7	0.12	17.6	0.13
<b>GENDER</b>																
W1	<b>16.65*</b>	<b>0.26</b>	3.2	0.25	4.7	0.2	4.5	0.12	2.8	0.17	8.7	0.27	<b>17.3*</b>	<b>0.27</b>	2.3	0.1
W2	6.67	0.17	2.3	0.2	<b>10.6**</b>	<b>0.3</b>	<b>14.2*</b>	<b>0.22</b>	<b>13.9*</b>	<b>0.37</b>	2.9	0.15	<b>19.16*</b>	<b>0.28</b>	3.9	0.1
W3	7.7	0.18	8.9	0.38	4.9	0.2	<b>13.5*</b>	<b>0.22</b>	2.7	0.16	<b>15.04*</b>	<b>0.34</b>	<b>21.04*</b>	<b>0.3</b>	3.3	0.1
W4	4.3	0.14	5.03	0.3	8.1	0.27	<b>16.9*</b>	<b>0.25</b>	<b>8.8**</b>	<b>0.3</b>	4.7	0.2	<b>13.5*</b>	<b>0.24</b>	<b>13.7*</b>	<b>0.2</b>
W5	4.03	0.13	2.99	0.25	<b>9.1**</b>	<b>0.3</b>	<b>21.05*</b>	<b>0.28</b>	5.03	0.23	4.9	0.2	<b>16.3*</b>	<b>0.26</b>	<b>11.2*</b>	<b>0.2</b>

$\chi^2$  – Pearson chi2 statistics

V – Cramer's indicator

\*Correlation is significant at the  $p < 0.01$  level

\*\* Correlation is significant at the  $p < 0.05$  level

Source: own research.

Analysing the influence of age, level of education and gender on the way of using Wikipedia among the respondents it needs to be stated that there are differences among the studied groups. In general, it can be observed that these variables have the most significant influence in the Turkish, Russian, American and Polish groups.

Taking into account the results obtained in relation to age it needs to be noted that it differentiates the use of Wikipedia to the greatest extent in the Turkish group. In this group the correlations ( $p < 0.05$  and  $p < 0.01$ ) with the use of Pearson's chi-square coefficient were noted. The largest group of the respondents looking for work-related materials in Wikipedia (W1) are the people from the age range of 21–30 ( $p < 0.01$ ), similar correlation was obtained in the American group ( $p < 0.01$ ,  $V = 0.24$ ). On the other hand, Wikipedia is a source used for looking for studying materials (W2) and interesting facts (W3) ( $p < 0.01$ ) among the Turkish respondents from the age group of 15–30. Moreover, in the Turkish group statistically significant correlations were obtained in relation to editorial activity of the respondents. People who place new information in Wikipedia (W4) belong to the oldest group distinguished among the studied respondents ( $p < 0.05$ ,  $V = 0.17$ ). On the other hand, the corrections (W5) are most often done by the respondents from the age group of 21–30 ( $p < 0.01$ ,  $V = 0.19$ ). Similarly, in the German group the editors (W4) are most often the oldest participants of the study ( $p < 0.01$ ,  $V = 0.35$ ), and the level of the Cramer's V factor denotes the moderate strength of this interdependence.

In the Chinese group two statistically significant correlations between the ways of using Wikipedia and age were noted. This medium is a source of looking for work-related materials (W1) ( $p < 0.01$ ,  $V = 0.22$ ) in the oldest

group of the Chinese respondents (31 and more). On the other hand, it is most often used for looking for studying materials by the younger respondents (21-30) ( $p < 0.05$ ,  $V = 0.19$ ). Although these correlations are statistically significant the level of Cramer's V factor indicates that they are weak. In the German group age also influences using Wikipedia for studying (W2) ( $p < 0.01$ ,  $V = 0.32$ ). Among the Russian respondents the largest group of Wikipedia users is from the age range of 15-21, that is the youngest ones ( $p < 0.01$ ,  $V = 0.34$ ). The levels of Cramer's V factor in these both groups indicate the correlations of moderate strength.

It is also worth emphasizing that in the studied Indian, Polish and Spanish groups no statistically significant correlation showing the influence of age on using Wikipedia was observed.

The level of education influences to the greatest extent using Wikipedia resources in the Russian and Turkish groups. In the Russian group pupils and Bachelor's students more often look for studying materials on Wikipedia (W2) than others ( $p < 0.01$ ). Moreover, this correlation was established at the moderate level ( $V = 0.46$ ). Other activities which involve using Wikipedia, that is looking for interesting facts and editing its resources (W3, W4, W5) are most often performed in the Russian group by the Master's students.

In the Turkish group the level of education influences using Wikipedia for work purposes (W1) and Master's students predominate here ( $p < 0.01$ ,  $V = 0.22$ ), for studying (W2) with the predominance of Bachelor's students ( $p < 0.01$ ,  $V = 0.23$ ) as well as looking for interesting facts (W3) ( $p < 0.01$ ,  $V = 0.18$ ).

As far as the German and American groups are concerned one statistically significant correlation between the level of education and the way of using Wikipedia resources was noted in each group. In the German group the largest number of Wikipedia editors (W4) was observed among postgraduates ( $p < 0.01$ ,  $V = 0.3$ ). Cramer's V factor indicates the moderate strength of this correlation. On the other hand, in the American group the largest number of the respondents using Wikipedia to expand their knowledge (W2) was observed among pupils ( $p < 0.01$ ,  $V = 0.21$ ).

It should also be emphasized that in the researched Chinese, Indian, Polish and Spanish groups no statistically significant correlation indicating the influence of the level of education on the way of using Wikipedia was observed.

In the studied groups gender influences the ways of using Wikipedia resources to various extents. The largest number of correlations was observed in the American and Polish groups. In the group of American respondents women predominate in terms of using Wikipedia resources to expand their knowledge (W2) ( $p < 0.01$ ,  $V = 0.28$ ). On the other hand, men definitely predominate in terms of collecting work-related materials through Wikipedia (W1) ( $p < 0.01$ ,  $V = 0.27$ ), looking up interesting facts (W3) ( $p < 0.01$ ,  $V = 0.3$ ) and editing (W4:  $p < 0.01$ ,  $V = 0.24$  and W5:  $p < 0.01$ ,  $V = 0.26$ ). Similar results were obtained in the Polish group where women much more often look for interesting facts (W3) ( $p < 0.01$ ,  $V = 0.22$ ) and edit Wikipedia resources (W4:  $p < 0.01$ ,  $V = 0.25$  and W5:  $p < 0.01$ ,  $V = 0.28$ ).

In the German group the majority of women browse Wikipedia in order to find studying materials (W2) ( $p < 0.01$ ,  $V = 0.3$ ), while men are editors of its resources. A very similar situation was observed among the Russian respondents where women predominate in terms of using Wikipedia for studying (W2) ( $p < 0.01$ ,  $V = 0.37$ ) and men predominate as editors (W4) ( $p < 0.01$ ,  $V = 0.3$ ). It should be added that in both groups the strength of statistically significant correlations was established at the moderate level ( $V \geq 0.3$ ).

In the Turkish group two statistically significant correlations were observed as far as the influence of gender on editing Wikipedia resources is concerned. In the case of the Turkish respondents in both situations men predominate (W4:  $p < 0.01$ ,  $V = 0.2$  and W5:  $p < 0.01$ ,  $V = 0.2$ ).

On the other hand, in the Spanish group one statistically significant correlation indicates the predominance of men looking for interesting facts in the Wikipedia resources (W3:  $p < 0.01$ ,  $V = 0.34$ ). It is worth adding that Cramer's  $V$  factor denotes moderate strength of this relation.

The analysis of Pearson's chi-square correlation among the Chinese respondents showed that gender influences only one area of activities re-

lated to using Wikipedia. The studied Chinese men predominate in terms of using Wikipedia to look for work-related information (W1:  $p < 0.01$ ,  $V = 0.26$ ).

It should also be highlighted that only in the Indian group no statistically significant correlation indicating the influence of gender on the way Wikipedia is used was observed.

## Conclusions and business implications

Summing up the influence of determinants such as age, level of education and gender it should be stated that gender has the greatest significance in terms of using Wikipedia resources. As far as age is concerned it is most often influential in relation to W2 that is using Wikipedia to search for studying materials. In the Chinese, German, Russian and Turkish groups it is done by the youngest respondents (<30 years). Therefore, it can be stated that in these groups H1a was confirmed. On the other hand, editing is done by older respondents from the German and Turkish groups where it can be concluded that H1b was confirmed. The consolidated summary of the working hypotheses in all the studied groups is presented in Table 3.



**Table 3. Correlations between age, level of education and gender and the ways of using Wikipedia – verification of the hypotheses**

	T1 Age		T2 Education level		T3 Gender	
	H1a	H1b	H2a	H2b	H3a	H3b
China						
India						
Germany						
Poland						
Russia						
Spain						
United States						
Turkey						

**Hypothesis confirmed**

**Hypothesis rejected**

**Source: own research.**

The level of education influences to the greatest extent the activity of looking for studying materials in Wikipedia resources (W3). Master’s students predominate here. However, pupils and Bachelor’s students from the Russian and Turkish groups to the greater extent (in comparison to the remaining groups) look for studying materials. It should be therefore stated that in these groups H2a and H2b were confirmed. On the other hand, in the American group H2a was confirmed while in the German one H2b.

Gender to the greatest extent differentiates the way Wikipedia resources are used. Women more often look for work-related materials there, while men look up interesting facts and are editors of its resources more often than women. The analysis of Pearson’s chi-square correlation showed the validity of H3a in the German, Polish, Russian, Spanish and American groups. On the other hand, H3b turned out to be true in the German, Polish,

Russian, American and Turkish groups. It should also be added that the only group where no confirmation of correlation between the studied determinants and the way of using Wikipedia was obtained is the Indian group. The levels of Person's chi-square correlation indicate that the researched characteristics also have little influence in the Chinese and Spanish groups.

The results presented in the article have a significant application value. They provide information about using Wikipedia in various countries in relation to the users' characteristics. First of all, they can be applied by specialists managing Wikipedia, as thanks to this knowledge they can better adjust the functionality of Wikipedia in particular markets. The studies provide information about the activity of Wikipedia users which might be applied by teachers and trainers using this source when transferring information. Although, as it was mentioned before, information is placed in Wikipedia by various users and it should be applied in an appropriate way. The knowledge about the characteristics of users who are editors in particular markets may also denote the level of information that is placed. The research showed that mostly they are men who are older than 30, professionally active or are Bachelor's students.

Moreover, the results give valuable knowledge to enterprises that want to use Wikipedia in order to present their business activity. It should be highlighted that all the biggest enterprises have their Wikipedia pages. This medium can be used as a promotion tool in business activity because, as it was mentioned before, Wikipedia is often the first Internet source of looking for information about a particular subject.

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