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Differences between women and men in social network usage – selected aspects[1]

Abstract. Analysis of gender may be applied to many areas of human personalities and activities, including business, science, ICT, society and policy. Thus combining gender issue and innovativeness should be explored in search of extraordinary sources of progress. The purpose of this article is to verify outcomes of one of the themes: the identification of differences between women and men in functionalities and types of knowledge themes obtained from the Internet. The hypothesis was: making the Internet available does not require creative thinking skills from students in acquiring knowledge from the accessible sources online or its operationalization, thus they have to be learned as part of the teaching process. The article contains the results of a pilot survey study conducted among students. The hypothesis was confirmed. Students using the Internet, and particularly social networks, do not creatively seek new sources of knowledge and resources, and also cannot operationalize or work independently and creatively on these resources. Internet access as such is not enough. It is necessary to for it to be reflected in the formal transfer of knowledge in universities, as exercises, personal training, or other forms of training, to prepare students for the efficient and effective use of the Internet.

Keywords: Human Resources Management, Education and Inequality, Higher Education Development Strategy, Gender Diversification, Undergraduate Students

Różnice związane z płcią w zakresie korzystania z sieci społecznościowych – wybrane aspekty

Abstrakt. Dokumenty Komisji Europejskiej dotyczące europejskiej perspektywy 2020 podkreślają, że zapisy równościowe co do roli kobiet i mężczyzn są dla Europy niezbędne dla Europy, aby wzmocnić wykorzystanie całego swojego potencjału. Dlatego też pozycja kobiet i mężczyzn w gospodarce i społeczeństwie jest ważnym polem badawczym w poszukiwaniu nadzwyczajnych źródeł osiągania postępu. Szczególnie w gospodarce opartej na wiedzy, gdzie innowacyjność zajmuje miejsce kluczowe. Analiza w aspekcie płci może być stosowana do biznesu, nauki, technologii informacyjno-komunikacyjnych, społeczeństwa i polityki. A więc także połączenie kwestii płci i innowacyjności powinny być traktowane jako poszukiwanie niezwykłych źródeł postępu. W artykule przedstawiono wyniki jednego z zadań podejmowanych przez autorów w ramach projektu badawczego zatytułowanego „Innovative Gender – nowe źródło postępu". Identyfikacja różnic między kobietami i mężczyznami w umiejętności pozyskiwania wiedzy z Internetu, a także jej wykorzystania (transformacji dla różnych celów) może dostarczyć pewnych uzupełniających dowodów na istnienie określonych źródeł damskiej i męskiej kreatywności. W artykule przedstawiono wyniki badania pilotażowego przeprowadzonego wśród studentów. Głównym wnioskiem jest to, że zarówno kobiety jak i mężczyźni korzystali z sieci społecznych głównie jako sposobu

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komunikowania się ze znajomymi, poznawania nowych ludzi, codziennych rozmów o przypadkowych i osobistych sprawach oraz problemach. Ponad 50% wszystkich kobiet i mężczyzn wskazało, że korzysta z Internetu na uczelni iw pracy, ale tylko 14% kobiet i 7% mężczyzn korzystać z wielu serwisów społecznościowych, aby znaleźć informacje i wiedzę niezbędną do rozwiązania profesjonalnych i praktycznych problemów zawodowych czy naukowych. Więc pytanie brzmi, czy Internet zapewnia dostęp do wysokiej jakości wiedzy?

Słowa kluczowe: zarządzanie zasobami ludzkimi, edukacja i nierówności, strategia rozwoju szkolnictwa wyższego, zróżnicowanie płci, studenci pierwszego stopnia

1. Introduction

The equal participation of men and women in the economy, society, and higher education are important areas of study and potential strengths of the European Union (European Commission 2015). The problems undertaken are related to differences in ethics, culture, poverty, education, social values etc. That is the reason why study results are not only country specific, but also the subject of specific research (Wade and Ferre 2015).

The research team at the Faculty of Economics and Innovation at the Jagiellonian University adopted these indications in considering the importance of the different characteristics of men and women in the innovation process, in the research project entitled: Innovative Gender as a New Source of Progress (InnoGend). Why 'innovative gender'? Because to become an innovative man or woman (in a given place and time) means that each human being must make use of every opportunity to develop her/his skills and capability to contribute best to the country's devolvement and a better quality of life/wellbeing for the individual/family through: participation, new ideas, solid knowledge technology, entrepreneurship,and cooperation. To reach these objectives gender equality has to be imposed and gender plurality implemented. Combining gender issue and innovativeness, which is crucial for the development of a modern knowledge based economy, should bring new findings on the foundations of smart growth and future-oriented development. In addition, to adopt new thinking into economic and innovation theory: hitherto most of these are gender neutral. So InnoGend is a concept that combines the roles of women and men with the process of innovativeness and creativity. In our research we concentrate on the specificities of innovative behavior by men and women. Learning about the special aspects of female and male innovativeness may result in finding new sources of progress and competitive advantage, also through the elimination of existing barriers. The partners of the project are:

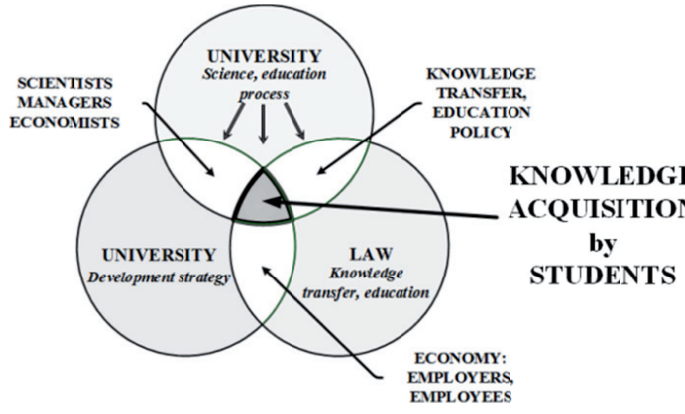
- Jagiellonian University – the project promoter
- University of Warsaw
- Østfold University College, Norway

Co-operators: firms, the Marshall offices, scientific institutes and units, science-technology parks, NGOs, journalists.

One of the research areas lying within the spectrum of interest for the InnoGend project is the issue of acquisition of knowledge by students, including gender diversity. In modern studies of the subject, a number of issues in the area of gender diversity are covered, including demographic issues and their evolution (Young and Fisler 2000); the role of gender in different areas of science (Bank 2011; Mitchell, Simmons, and Greyerbiehl 2014; Smith 2015); the issue of efficient and effective educational process and results achieved (Rothstein 2004); ethics (Buxarrais, Esteban and Mellen 2014); and many others. The issue of gender equality in many areas of social and economic life has also constituted a significant research area for years (Zachorowska-Mazurkiewicz 2009). The above examples are thus issues related to academic education analysed with different challenges and perspectives of science – psychological, sociological, technological, economic, and managerial. Universal access to the Internet has led to accelerated interest in this medium of communication in academic education. Many e-learning centres have arisen, as has research on the scope, timing and methods of its use in education (Ellis, Ginns and Piggot 2009). Internet usage in the teaching process has required new and different activity on the part of students, who have had to acquire skills in navigating the increasing number of websites and acquiring knowledge in this way. The transfer of knowledge through lectures, exercises or laboratories with the physical presence of students are increasingly being supplemented, if not supplanted, by e-learning. This new aspect of student activity was one of the impulses to undertaking extensive research on this different dimension of student activity (Biggs 2006). Subject to study were also issues related to the student's own motivation to use the Internet as a virtual space, serving not only social contacts, but also systemizing the acquisition of knowledge (Beck et al. 2014). The systematic transfer of knowledge through e-learning is for the student a certain, reliable source of knowledge. However, the Internet hosts an increasing number of sources of knowledge, whose credibility needs to be assessed by the student. An increasing number of bookstores, libraries, publishers, authors' own publications, journals, offer access to books and individual scientific papers. Increasingly, access to knowledge is offered online not only through the official portals of known and well recognized organizations, but by informal, private webpages and social networks. Thus, in the process of studying, the issue of new creative exploration of knowledge online, namely making choices about these sources and verification of the knowledge contained therein, has arisen. While e-learning courses run by institutions known to the student are a reliable and certain way of transferring knowledge, other sources, and less well-known providers of knowledge online require prior checking. This phenomenon creates the need for training new skills for creative knowledge acquisition alongside the need to verify its authenticity. In this context, it is not just acquiring knowledge which is essential, undoubtedly important though it is, that is the primary source of innovation, but it is only a kind

of resource, whereas crucial is logical thinking, reasoning which is a specific type of operational action on these resources. Functioning in social networks in search of the knowledge necessary to solve problems must be classified among activities bringing added value, because through cooperation online the question is resolved. It is worth noting that the formation of so many places and networks of knowledge acquisition and processing is a manifestation of the applicability of soft innovation (which includes social innovation), in connection with the explosion of the servicisation of the economy. The vision of the growing trend to use knowledge achieved through the development of innovation in services, including education, will lead to a kind of revolution in the modelling of growth, based on an assessment of innovation in the industry, while 80% of GDP (in developed countries) is produced by services, and is actually the multidimensional work of creative people, and not of capital (Piketty 2013). Placing the network aspect of teaching in the realm of the current discussion on the relationship of hard vs. soft innovation of is new, and past research on the acquisition of knowledge in social networks, including gender, has not covered it. However, we cannot lose sight of the fact that this new capability for operating on the cumulative fund of knowledge may constitute an opportunity to accelerate its availability on the one hand, but on the other it may also be a barrier to the abilities and skills in finding it, establishing the credibility of its sources, or the methodologies of its processing and use. This phenomenon has a significant effect on the conduct of the educational process, which not only cannot be stuck doggedly in the classical forms of knowledge transfer, and cannot afford to reject e-learning, but also must become involved in educating students in the creative skills of acquiring knowledge online. The difference in the formula of the educational process should be reflected in the university's development strategy, as a practical managerial tool; it implicitly involves the management of human resources in dual terms: from the didactic point of view of the university as the organization responsible for the transfer of tried-and-tested knowledge, and from the point of view of the student, acquiring the skills at university for creative and thus independent self-knowledge acquisition. In the teaching process, whose main objective is to provide students with tried-and-tested knowledge and the ability to operationalize it, they should be seen written in the strategy of university development objectives and various activities, as well as the environmental conditions in which the process occurs, exemplified mostly by legal provisions, as part of the institutional environment, as well as material factors, infrastructure conditioning the quality of operationalizing knowledge in the teaching process. (Figure 1).

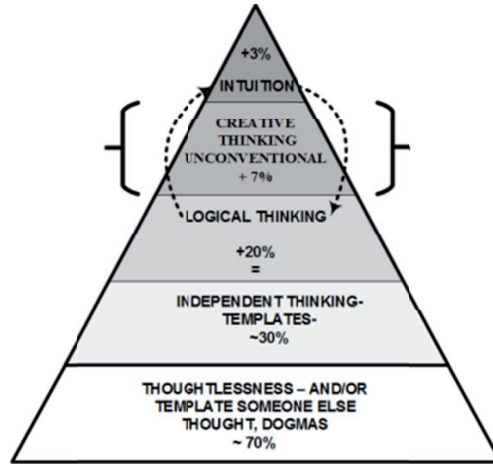
Figure 1. Higher education environment



Source: The Authors's own work.

Of course, the university's development strategy includes issues related not only to the teaching process, but also to the student's further scientific, professional or business career. Thus, it constitutes a practical tool for efficient and effective management, and at the same time in the wider context of human resource management in view of the student's future (Kaplan and Norton 2004; Afauh 2009; Sesil 2014, Fitzenz and Mattox 2014). The law, as the leading element in the institutional environment, is the norm and rules regulating the ways of carrying out the process of education, scientific development, (degrees and titles), the terms, conditions, and assessment of publications at home and abroad, the access to and use of the knowledge of others and their own by participants in socioeconomic life, including in the Internet, as a kind of social innovation. The acquisition and effective operationalization by students of the knowledge accumulated in social networks requires continuous creativity in thought and action from them. Hence, the area denoting knowledge acquisition by the students has a dual dimension (Figure 1). In addition to intuition, logical thinking, relatively independent (but targeted), shaped in the routine teaching process, necessary in the development of capacity and competence, it turns out that unconventional, creative thinking, which leads to the independent, creative (individual or team) exploration and operationalization by students of new sources of knowledge (Figure 2) is required. At higher levels of the pyramid, that is, at the higher levels of thinking skills, is the ability to be in several areas simultaneously, which may indicate that the operationalization of knowledge with such skills can ensure its effective use in achieving creative solutions.

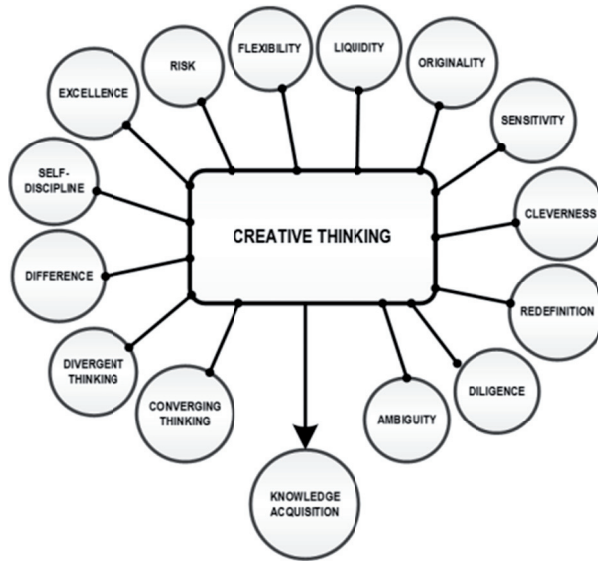
Figure 2. Thinking factors



Source: Adapted from (Chafee 2001).

Creative thinking focuses many factors in personality, cultural, ethical, gender diversity, etc. terms. It would seem that the unconventionality of this thinking in terms of knowledge acquisition is realized precisely in the skills of its acquisition through the Internet, opening up challenges and being used to solve problems (Figure 3).

Figure 3. Creative thinking as a new way of knowledge acquisition



Source: The Authors's own work.

In a situation where the search for knowledge through students' creative thinking is not yet a settled way of imparting knowledge in teaching, a research problem arises which can be formulated in the form of the following question: Do students demonstrate creative thinking, manifesting itself in the acquisition of knowledge online? As in the process of knowledge acquisition, simply making the Internet accessible would appear to be insufficient. It is necessary to develop the skill of creative thinking in students in acquiring knowledge from sources available online. Hence we can formulate the following research hypothesis: Making the Internet available does not require creative thinking skills from students in acquiring knowledge from the accessible sources online or its operationalization, thus they have to be learned as part of the teaching process.

Following in the wake of this hypothesis, if it is confirmed, there is a need to find new ways, methods, and technologies aimed at preparing students for acquiring new knowledge in networks, with particular emphasis on skills training to verify the reliability of the sources available on the network and acquiring the argumentation that the knowledge gained in this manner is valuable to the student in terms of the previously formulated problem to be solved. The answer to this research question and verification of the hypothesis was carried out by a pilot survey (supported by interviews) regarding the use of the Internet specifically for independent knowledge acquisition, taking into account the issue of gender diversity.

2. Research method

One of the research tasks adopted in the previously signalled InnoGend project is a pilot study to evaluate the ability of students, taking into account differences in gender, to acquire and creatively use the knowledge available from various sources. One of them is usage of the Internet, not only for the social purpose, but for improve knowledge. While purposes of the social network usage may not be knowledge intensive, the usage of Internet however should have creative character. The pilot programme presented in this article was conducted through a survey which allow to get answers for independent questions in two areas: the Internet access usage and specifically the social network usage by the students. The presented results are precisely named as the questions were. The research hypothesis was verified based on answers characterised the Internet access. The development of the survey was preceded by broad consultation among teachers in various fields of science and students studying in various specializations. On this basis, we defined six basic kinds of knowledge, which students could creatively seek online. It concerns to use the Internet in the broad sense, not only as the social network. Efficient and effective tests, and therefore those which would provide verifiable answers, required to the maintenance of an appropriate lack of bias in the survey and unambiguity in the questions posed. So the attitudes and needs of students

most often cited as relevant to their use of the Internet in the creative process of acquiring knowledge were selected and link with the characteristics of six types of knowledge. On this basis, we prepared and defined personal profiles (Table 1).

Table 1. Personal profiles defined in the survey

Name	Description
Personal Profile A	The person uses multiple social networks to find information and knowledge necessary to solve professional and practical problems; mainly looking for patterns, examples, practical solutions to practical problems; it is not specifically related to any social network portal
Personal Profile B	The person treats social networks as a source of knowledge required in study, thesis writing, looking for bibliographies, articles, books and research reports; it is not specifically related to any social network portal
Personal Profile C	The person considers social networking sites primarily as a way to communicate with friends, meet new people, talk everyday about casual and personal issues and problems, fond of using selected portals to which they remain committed for a long time
Personal Profile D	Social networking is an opportunity to present their own political and social activities; it is associated with thematic portals, for all areas of its activity; initiates actions and actions (e.g. protests, demonstrations, online voting on various issues)
Personal Profile E	Shares with others the results of personal interest (hobbies); is a participant in one (or a small number) thematic portal closely related to their own hobby
Personal Profile F	The person use of a variety of social networking sites; seeks theoretical knowledge, practical and useful solutions, entertainment, contact with other people; is not associated with any portal or group

Source: The Authors's own work.

The basic differences between the profiles relate, for example, to such issues as: purposefulness in the search for sources of knowledge, attitudes, interests, or the functioning of the respondent in one or more selected social networks. In particular, personal profile B was prepared based on an assumption that the person creatively seeking new knowledge sources necessary to study, broaden their knowledge, solve problems, write papers various in nature, and broaden bibliographic awareness, do not at the same time remain faithful to the selected portal. If the majority of respondents indicate this profile, as describing their greatest use of the Internet, and especially social networking sites, then it means that the research hypothesis has not been confirmed. In contrast, every other survey result in the selection of personal profile, would confirm the research hypothesis.

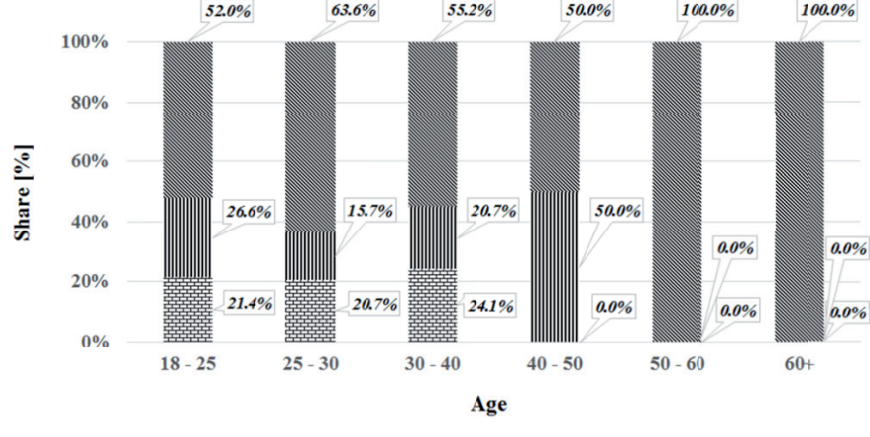
For the purpose of this pilot study, the construction of the survey was based mainly on questions bearing a list of possibilities and "Yes/No" answers. The choice of such a formula was indicated by the previously conducted consultations which indicated two benefits flowing from this. Firstly, it was recognized that questions such

as these were the most appropriate to the type of activity; secondly, it turned it out to be necessary to use the possibility of using a small number of pilot study respondents to use for the scale of response. Therefore, the analysis of the data obtained required the use of tools in the field of descriptive statistics, such as the leading percentage of respondents in the rankings of contingency tables by gender. It was decided also to deviate from the sampling process, providing the survey to all students, relying on the responses of those who voluntarily participated in the study. Therefore, the obtained results of the survey were related to the population and not to the sample.

3. Research results

389 respondents participated in the pilot study from among a group of 1200 students. The respondent population included 70% women and 30% men. The largest group was in the 18–25 age range. In this age group the respondents were 62.5% women and 50.4% men; in this group, 55.1% of women and 58.1% of men were representatives of cities with over 100,000 inhabitants. The next group of respondents, respectively, 20% of women and 20.5% of men, were people living in cities of less than 100 000 inhabitants, while 23.9% of women and 21.4% of men were rural residents. Comparing the age of the respondents and their place of residence it was found that in each age group most respondents are residents of cities with a population of over 100 000 (Figure 4).

Figure 4. Age vs. place of residence of survey respondents

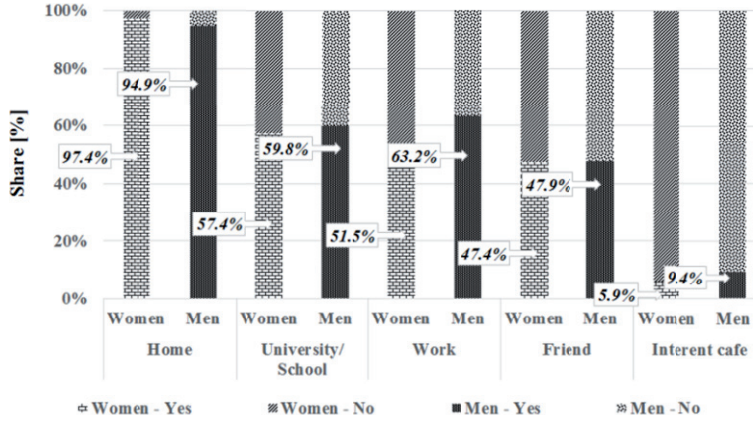


Source: The Authors's own work.

In the 40–50 age group, this share was 50%. At the age of 50–60 and 60+ equals 1 participant each, which means a 100% of participants of the survey population at this age live in a city with a population of over 100 000 habitants. All respondents

use the Internet every day, which is evidenced by 92.3% women and 91.5% men. It can therefore be concluded that the population of respondents is a correct source of information on how to use the Internet. As the place where the Internet is used, 97.4% of women and 94.9% of men respondents indicated the home, 57.4% of women and 59.8% of men indicated the university, and 51.5% of women and 63.2% of men indicated the place of work (Figure 5). Other places were indicated at a lower percentage.

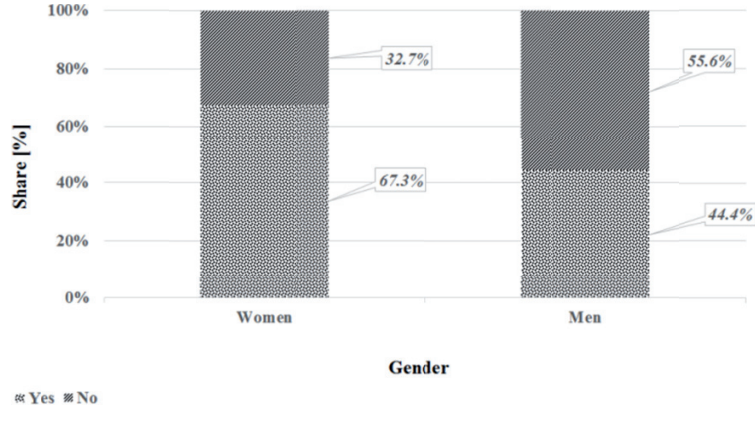
Figure 5. Places of the Internet usage



Source: The Authors's own work.

The study shows that both women and men indicated the home, university, and workplace as the place where they most frequently used the Internet. Moreover, 67.3% of all women and 44.4% of men respondents constantly use social networking sites (Figure 6).

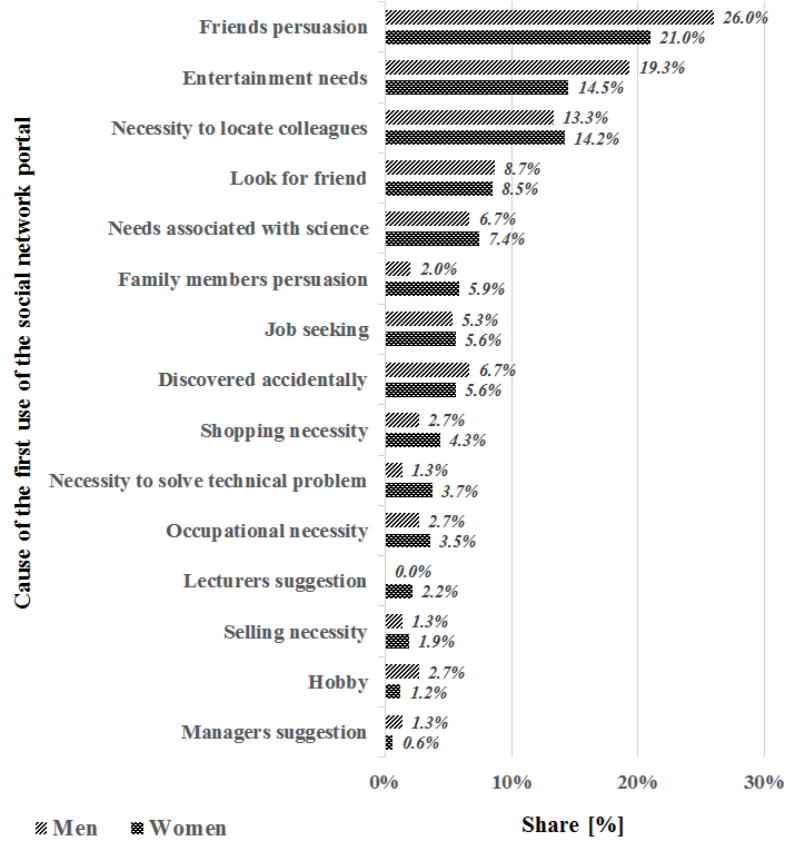
Figure 6. Social network usage



Source: The Author's own work.

Based on the study, differences in the determination of purpose and meaning of use of social networking among women and men were demonstrated. As the first reason to use social networking, 21% of all women and 26% of male respondents indicated *Friends' persuasion* (Figure 7). It is also the biggest difference in reasons of the first usage of the social portal between women and men.

Figure 7. Cause of first use of a social network

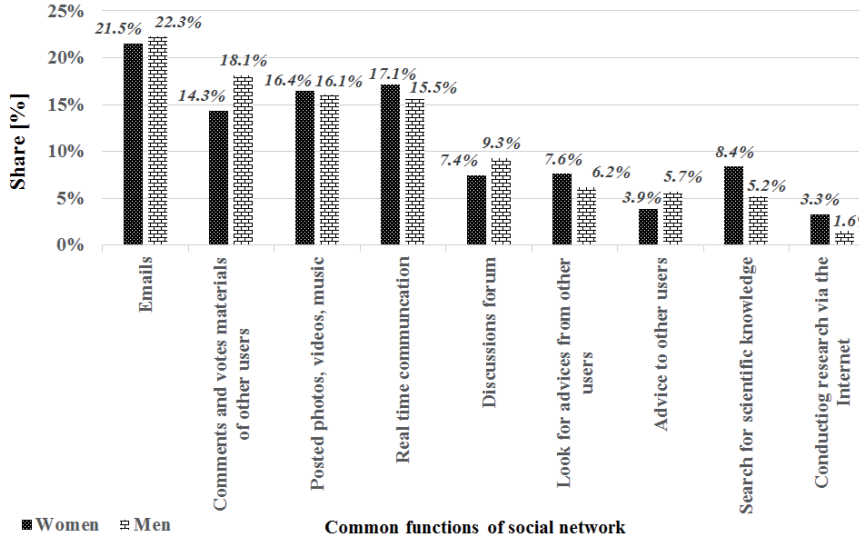


Source: The Authors's own work.

The second and also important reason is *Entertainment needs*: 19.3% women and 14.5% of men. Noteworthy is the fact that respondents refer to one of the most important reasons for using the social network, taking into account the acquisition of unconventional knowledge, namely *Needs associated with science*, which is indicated by only 7.4% of women and 6.7% of men respondents (Figure 7). On the basis of the calculations, it was thus found that social networks are not a source of respondent search for content of a scientific nature.

The question then arises of what were the functionalities available on social networking sites that respondents most frequently used? In the case of 21.5% of women and 22.3% of men respondents, the most commonly used functionality proved to be email (Figure 8).

Figure 8. Common functions of social networks used by the respondents



Source: The Authors's own work.

The next place in the ranking was the functionality of communication in real time, which was indicated by 17.1% of women 15.5% of men respondents in the survey; 16.4% of women and 16.1% of men used them to upload photos and videos, while 14.3% of women and 18.1% of men mentioned the functionality of having the opportunity to comment and vote on the evaluation of materials published online by other users.

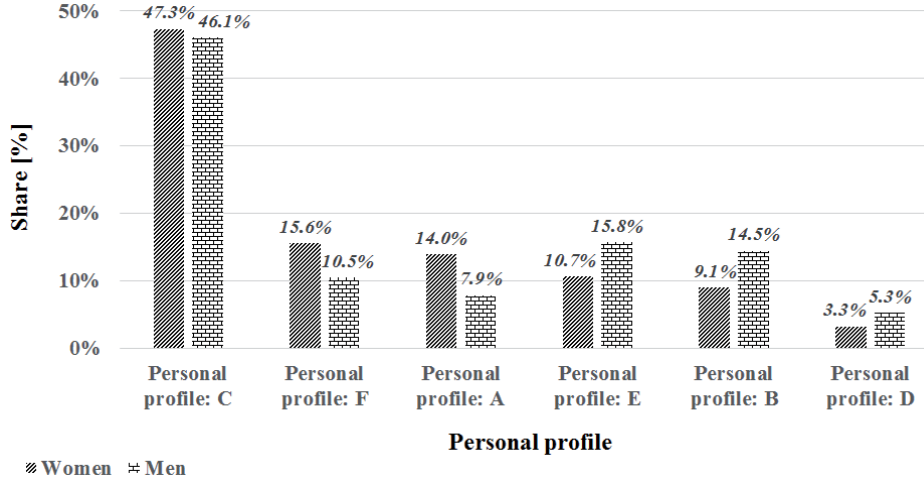
Based on the survey it was found that 69.3% of women and 72% men respondents in the study indicated a group of four major functionalities that they use online, which are: email, communication in real time, uploading photos and videos, and commenting and voting, and assessing materials posted online (Figure 8).

Moving on to the analysis of the personal profiles of how social networks are used, it can be seen that of the six types of profiles, 47.3% of women and 46.1% of men who are participants in the study identified profile C as that which best suits the way they use social networking sites (Figure 9).

Further, 15.6% of women indicated profile F and 15.8% of men chose profile E. In contrast, personal profile B, specifically dedicated to the creative search for

sources of knowledge, study and raising bibliographic awareness, was indicated by only 9.1% of all women and 14.5% of male respondents in the population of students surveyed.

Figure 9. Personal profile of usage the social networks



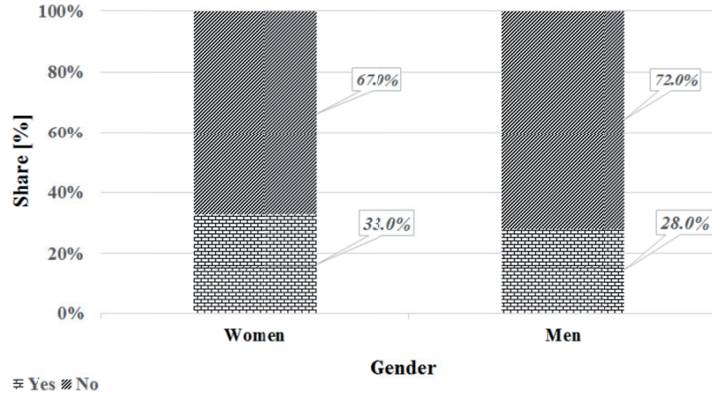
Source: The Authors's own work.

On the basis of the pilot studies, we found that both women and men indicated personal profile C as currently the most suitable and useful in the use of social networking resources (Table 1), and defined as: The person considers social networking sites primarily as a way to communicate with friends, meet new people, talk everyday about casual and personal issues and problems, fond of using selected portals, to which they remain committed for a long period.

Since the profiles survey was dedicated to using Internet access, not only social networks, the answers indicated by respondents allow the research hypothesis to be verified. The respondents, both women and men, did not indicate personal profile B as leading, which in this context means that the research hypothesis was confirmed. Undoubtedly, then, students using the Internet, particularly social networks, do not creatively seek new sources of knowledge and resources, and also cannot operationalize or work independently and creatively on these resources. It is therefore necessary to stress once again that widespread Internet access, or running open sources, are insufficient to expect an increase in the level of students' knowledge and acquiring new skills in its use. This should be taken into account in university development strategies, and also in educational programs, issues related to the formation of knowledge acquisition skills online, and its verification and operational use to solve problems.

The next stage of the research was to determine whether respondents use the Internet at all, not just social networking sites, in search of knowledge. The calculations conducted show that only 33% of women and 28% of male respondents use the Internet to search for any kind of knowledge (Figure 10).

Figure 10. Usage of the Internet to find any type of knowledge



Source: The Authors's own work.

Respondents in the group of 33% of women and 28% men who seek any knowledge online, had the opportunity to specify more specifically in a separate question (besides personal profiles), what kind of knowledge they're looking for. Among seven options, the participants had the opportunity to select one of the following types of knowledge:

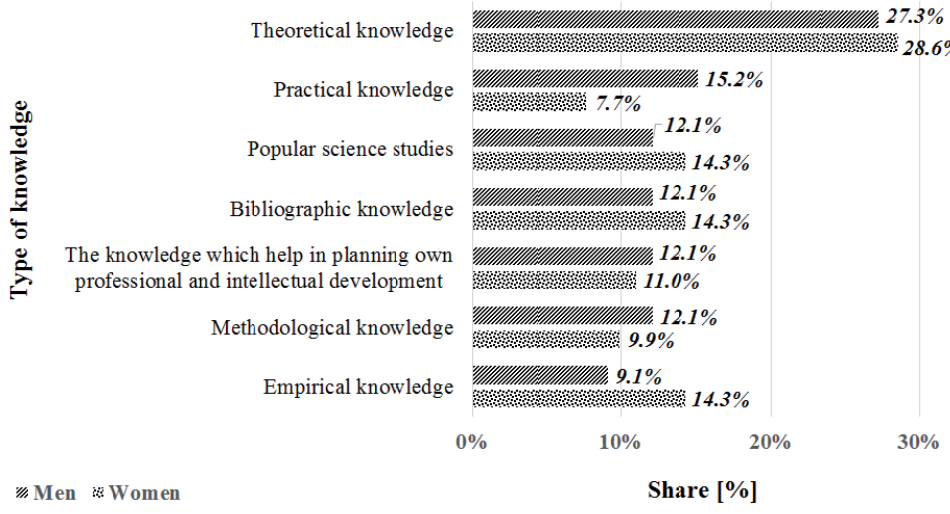
- theoretical knowledge – knowledge without practical usage;
- practical knowledge – "know – how";
- empirical knowledge – empirically proved hypotheses;
- methodological knowledge – knowledge about the methods used in science.

28.6% of women and 27.3% of men seek theoretical knowledge, and not applied (Figure 11).

The biggest difference between the answers of respondents considered in terms of gender was recorded in analysing their search for practical knowledge; because only 7.7% of women look for this kind of knowledge, and among men it is 15.2%, and therefore twice as many.

The results once again support the conclusion that students, regardless of gender, do not indicate use of the Internet as a means of creative questing for knowledge in non-university sources. The results presented confirm main conclusion of the research, as earlier formulated, at the same time confirming the research hypothesis.

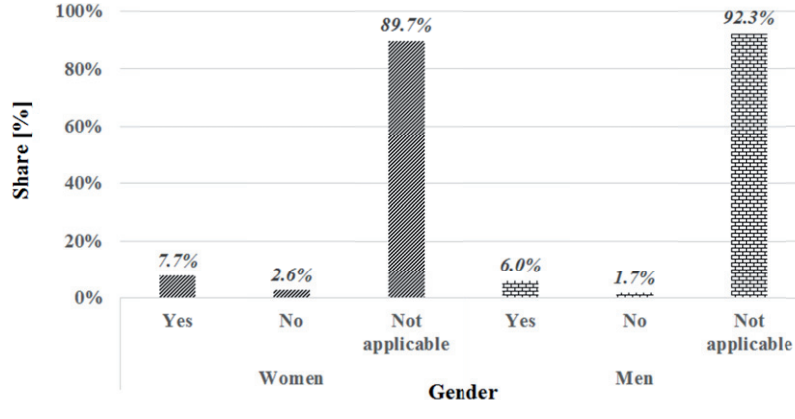
Figure 11. Types of knowledge searched by respondents



Source: The Authors's own work.

The last issue undertaken in the research, which is closely connected with the creative search for knowledge, is the credibility of the knowledge shared online, especially on social networks. The study indicates that 89.7% of women and 92.3% of men respondents believe that the verification of reliability of knowledge does not relate to its acquisition through the Internet, especially social networking sites (Figure 12). Therefore, they do not see the possible risks of unreliable knowledge, its lack of usefulness in solving problems, etc.

Figure 12. Social network usage



Source: The Authors's own work.

Based on the survey it was found that respondents who are students did not see the need to verify the authenticity of knowledge from the Internet, especially from social networking sites. Only 7.7% of women and 6.0% of men respondents see such a need, pointing to the necessity to extend the instruments for researching the reliability of knowledge online.

4. Discussion and conclusion

Based on the study it can be concluded that the achieved results confirm the research hypothesis. It can therefore also be concluded that in the process of acquiring knowledge, simply making use of the Internet available and disseminating open sources are inadequate. It is necessary to simultaneously develop skills of creative thinking in students in acquiring knowledge from sources available online, and indicate ways to operationalize them for the purposes of their own education, research and practical goals. Due to the lack these skills, currently, students do not look for creative new sources of knowledge on the Internet, especially on social networks.

The biggest differences between women and men using social networks are:

- over 67% of all women and over 40% of all men respondents use social networks;
- personal profile A (women 14%, men 7.9%) – which describes the usage of multiple social networks to find information and knowledge necessary to solve professional and practical problems; mainly looking for patterns, examples, practical solutions to practical problems; it is not specifically related to any of the social network portals;
- comments and votes on other users' materials functionality (women 14.3%, men 18.1%);
- search for practical knowledge: over 15% of men and over 7% of women look for this type of knowledge.

The most common (women and men) usage of social networks: over 90% of all respondents: use the Internet every day, at home; did not see the necessity to verify the authenticity of knowledge from the Internet, and in particular network portals. Over 50% of all women and men indicated usage of the Internet at university and work; both women and men indicated that persuasion by friends is the most common cause of the first use of a social network (women 21%, men 26% of all respondents). In the area of functions available through the Internet, over 21% of women and over 22% of men indicated email. Only 7.7% of women and 6.0% of men who are respondents confirmed a necessity to verify the authenticity of knowledge from the Internet, and in particular network portals. The most common usage of social networks indicated by women and men is personal profile C – where the user considers social networking sites primarily as a way to communicate

with friends, meet new people, talk everyday about casual and personal issues and problems, fond of using selected portals, to which they remain committed for a long period.

So, ultimately the results of the pilot study indicated that the acquisition of skills of creatively acquiring knowledge from different sources should be reflected in the formal transfer of knowledge in universities, as exercises, personal training, or other forms of training, to prepare students for the efficient and effective use of the Internet. This type of training fits into one of the main objectives included in university development strategies, which is a record of continuous improvement in forms of knowledge transfer and improving the quality of student education. Unfortunately, the existing "European framework for quality education" is far from ensuring conditions for the development of a creative class at universities (Florida 2005).

Literature

Afauh A., 2009, *Strategic Innovation: New Game Strategies for Competitive Advantage*, New York: Routledge.

Bank B.J., ed., 2011, *Gender and Higher Education*, Baltimore: John Hopkins University Press.

Beck E.E., Solbrekke T.D., Stuphen M. and Fremstad E., 2014, *When mere knowledge is not enough: the potential of building as self-determination, co-determination and solidarity*, "Higher Education Research & Development", 34: 445–457.

Biggs J., 2006, *What the Student Does: teaching for enhanced learning*, "Higher Education Research & Development", 18: 57–75.

Buxarrais M.R., Esteban F., Mellen T., 2014, *The state of ethical learning of students in the Spanish university system: considerations for the European higher education area*, "Higher Education Research & Development", 36: 472–485.

Chafee J., 2001, *Potęga twórczego myślenia*, Warsaw: Bartelsmann.

Ellis R.A., Ginns P., Piggot L., 2009, *E-learning in higher education: some key aspects and their relationship to approaches to study*, "Higher Education Research & Development", 28: 303–318.

European Commission, 2015, *Horizon 2020, Work Programme 2014–2015, Science with and for Society*, Brussels: European Parliament Publishing.

Fitzenz J., Mattox J., 2014, *Predictive Analytics for Human Resources*, New York: Willey.

Florida R., 2005, *The Flight of the Creative Class: The New Global Competition for Talent*, New York: Harper Business.

Freedman D., Pisani R. and Purves R., 2007, *Statistics*, New York: W.W. Norton.

Kaplan R., Norton D., 2004, *Strategy Maps: Converting Intangible Assets Into Tangible Outcomes*, Boston: Harvard Business School Press.

Mitchell Jr. D., Simmons Ch.Y. and Greyerbiehl L.A., ed., 2014, *Intersectionality & Higher Education: Theory, Research, & Praxis*, New York: Peter Lang Publishing.

Piketty T., 2013, *Le Capital au XXI siècle*, Paris: Seuil.

Rothstein J.M., 2004, *College Performance Predictions and the SAT*, "Journal of Econometrics", 121: 297–317.

Sesil J., 2014, *Applying Advanced Analytics to HR Management Decisions: Methods for Selection, Developing Incentives, and Improving Collaboration*, Upper Saddle River: Pearson.

Smith D.G., 2015, *Diversity's Promise for Higher Education: Making It Work*, Baltimore: John Hopkins University Press.

Triola M., 2010, *Essentials of Statistics*, London: Pearson.

Wade L., Ferre M.M., 2015, *Gender. Ideas, Interactions, Institutions*, New York: W.W. Norton.

Young J.W. and Fisler J.L., 2000, *Sex Differences on the SAT: An Analysis of Demographic and Educational Variables*, "Research in Higher Education", 41: 401–416.

Zachorowska-Mazurkiewicz A., 2009, *Role of Economic Policy in Reinforcing Gender Inequality – A Case Study of Poland in the European Union*, "Journal of Economic Issues", 43.2: 503–511.