

# THE USE OF INTERNET-TECHNOLOGIES FOR SCIENTIFIC AND EDUCATIONAL SERVICE ADVANCE (EXPERIENCE OF SSU)

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## **Introduction.**

All universities of international standard are research and educational, they gained acceptance, primarily as scientific centers, and their educational programs are based on the newest scientific achievements. If native universities (HEI) would like to save and increase their positions at the educational service market, they have to choose this way. One of the criteria, which define the positions of the modern HEI, is the informedness of the target group (prospective students, their parents, employers, colleagues-scientists etc) about HEI: the level of lecturers' and students' scientific research results proclamation; courses and attainment level of graduates, their being in demand at the labor-market etc [Illyashenko, Shypulina, 2012]. The practice shows, that according to these criteria it is possible to get HEI high rates quickly and with relatively few costs by using of internet-marketing modern technologies [Illyashenko, Shypulina. Innovative appliance, 2011; Illyashenko, Shypulina. WEB appliance, 2011]. It will give opportunity to set, keep and widen contacts with target groups, strengthen competitive positions of HEI at the domestic and world scientific and educational service markets.

Taking into account the foregoing authors set a task to investigate possibilities to use internet-technologies by Ukrainian HEIs for the scientific and educational service advance at domestic and world markets. Analysis was carried out through example of Sumy State University, which has third place in the rating of the classical universities in Ukraine.

The analysis was conducted due to the following breakdowns:

- to represent the role of internet-culture as the motivate mechanism concerning activity promotion and HEI competitiveness growing in internet-space;
- to reveal the role of HEI site as the instrument to create its image;
- to show the possibility to use scientific magazine site for scientific service advance into national and foreign markets;
- to reveal the role of the social networks in HEI scientific and educational service advance and providing of communications with target groups.

**1. Internet-culture as factor to provide high competitiveness of HEI in the internet-space.**

The authors show [Illyashenko, Shypulina, 2013], that internet-technologies use is effective only with internet-culture, as a motivate mechanism of HEI activity promotion in the internet-space. Generally authors investigate the HEI internet-culture as a complex of knowledge, skills, experience, believes, peculiarities of personnel behavior and relations, motivation of its behavior, organization of its work and management, which determine the character and stage of internet-technologies apprehension by the separate members of the group, departments, HEI in general, readiness and ability to use them effectively in different aspects of scientific and educational activity, transfer them into internet-space with aim to get economic or another benefit.

The main elements of HEI internet-culture are presented in Fig.1. High level of the internet-culture is a very important factor of HEI competitiveness, because the world tendencies testify, that scientific and educational activity is mostly transferred into the internet-space. One may use such author's approach for its appreciation.

Fig. 1. Constituents of the HEI internet-culture

Personnel	System of education and retraining	Organization	Motivation	Activity transference into the internet-space
Knowledge, experience, skills	Incoming control, selection, professional advancement, knowledge actualization	Structure, rulemaking, powers	Rational, moral and emotional motives	Separate operations, functions, activity type

Estimation of the innovative culture separate elements should be made due to the scheme:  $P_i = 0$  – element is absent;  $0 < P_i \leq 2$  – forming start;  $2 < P_i \leq 4$  – minimal level;  $4 < P_i \leq 6$  – medium level;  $6 < P_i \leq 8$  – on the level of the best native examples;  $8 < P_i \leq 10$  – on the level of the best examples in the world. Integral appraisal of the organization WEB-culture in general is rationally fulfilled as average weighted assessment of the separate elements. There is graphic interpretation of the internet-culture state expert appraisal on the fig. 1 by the Marketing and Management of Innovative Activities Department (MMIA Department) Sumy State University (SSU), where authors work.

Integral (average weighted) appraisal is 7,2, that is the best model in Ukraine. As the fig. 1 shows, the level of innovative culture due to some elements of MMIA Department corresponds to the best models in the world.

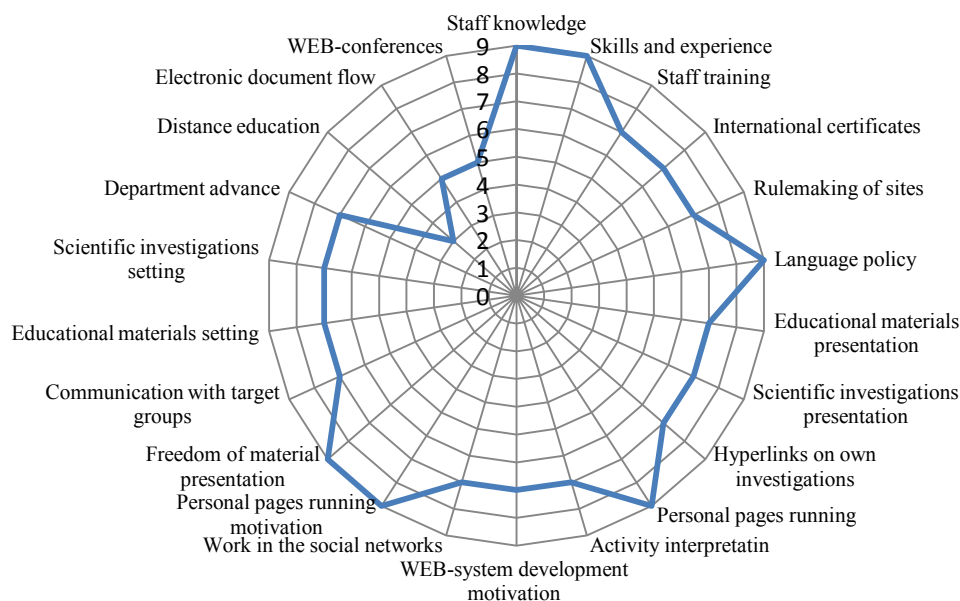


Fig. 1. Appraisal of the innovative culture separate elements [Illyashenko, Shypulina, 2013]

## 2. HEI subdivision site – instrument o its image making.

One of the main tasks of HEI and its subdivisions management is to make and increase the image. There are such main traditional instruments of image making<sup>1,2</sup> [Robinson, 1966; Lippman, 2004; Aleshyna, 1998; Ahtyamov, Shkardun, 2001]: corporative culture, advertisement, PR, direct marketing, business culture etc.

Without decreasing of their meaning, one should mention, that during the last 20 years new powerful instruments of image, caused by internet use, additionally appeared. One of such instrument is site of organization, as an internet- and WEB technologies product [Illyashenko, 2011]. Existing practice shows, that internet technologies use gives great opportunities for business, evens chances for market success of big and small organizations, because they use relatively cheap, widely available, standardized instruments. Internet technologies practically provide flash cast in any market, possibilities to draw circle of customers, and keeping at the same time addressness influence on the target customers [Illyashenko, Shypulina, 2013].

<sup>1</sup> <http://www.advlab.ru/articles/article565.htm>

<sup>2</sup> <http://www.promros.ru/magazine/2012/jun/imidzh-i-reputaciya-kompanij-segodnya.phtml>

Taking into account foregoing, the authors investigated and approved in practice the possibilities of organization site as its image making and developing instrument. The MMIA Department SSU<sup>3</sup> site was chosen as an object of research.

Image of MMIA Department was viewed due to some positions:

1. *Commodity image* of the educational service in specialties "Marketing" and "Management of Innovative Activities", at SSU at MMIA Department. There is information on site, which characterizes: special qualities of the educational service i.e. the opportunities to study by the European programs (double diploma, including semester, practice or training in the European HEIs), with indication of the concrete programs and students, who participate in them; quality of the educational service, that is higher than competitors have, and is confirmed with students' wins on the state subject contests, on the national and international contest of students' research papers; excellent peculiarity of training just at MMIA Department SSU i.e. profound knowledge in internet-marketing, that is testified by employment of graduates in this profession at native and international companies; high status of product consumers (employers) among which there are famous companies in the world; associations of educational service image, given by the famous Ukrainian people – MMIA Department assistants, authors of textbooks by which all Ukrainian HEIs are studied etc.

2. *External image* of MMIA Department. It is created through representing of different department activity aspects on site: scientific, educational, training and additional training of lecturers etc. These aspects are shown in news, representation of the department structural subdivisions (center of marketing research, scientific students circle, printing and publications center, center of the intellectual development and so on), specialties, scientific and social projects, lecturers' and students' characteristics and achievements, partnership with other HEIs, enterprises and establishments etc.

3. *Internal image* of MMIA Department. It is regarded from the assistants' points of view (lecturers and educational-subsidiary staff), and also students and characterizes corporative culture profitableness, prestigiousness of work and study at the department, opportunities of the career progress etc.

Internal image of the department is formed personally by assistants through their personal pages running on site. One part of the content is standardized (scientific degree, occupation, scientific interests, publications etc), another part is given at their discretion (personal scientific and other achievements, information for students, hyperlinks on educational and methodic materials etc). Besides, administrators present different aspects of staff activity, that influences the image, in news and different parts of site: training abroad, issue of monographs and text-

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<sup>3</sup> <http://km.fem.sumdu.edu.ua>

books, grants, scientific advising by students – winners of scientific contests and thematic olympiad. The internal image for students is formed through information about their employment, wins in scientific research contests and in thematic olympiad, training abroad, study by the double diploma and including semester programs abroad, participation in the scientific circles, amateur talent groups etc.

4. *Staff image* (external and internal) of Department lecturers, assistants and postgraduates. It is created through information on site: about professional competence (scientific degrees, prestigious grants and awards, certificates, holding of teaching and practical work in business etc); culturological aspects of lecturers' activity (communicational culture, creativity, particularly, musical, artistic, literature etc, participation in the cultural programs and projects of HEI, city, region, country); social and demographic and physical data; personal visual image.

5. *Visual image* of Department. There are such instruments in order to form it: site corporate identity and representing of its content; representing of the department distinguishing features, particularly: internet-marketing learning and use of marketing in social networks, business-analytics; annual international scientific and practical conferences; issue of the scientific journal, that is included into many international scientometrical bases; annual dedication in marketing specialist and innovators; anthem and flag of the department; project oriented organizational structure of the department etc.

6. *Social image* of Department. It is made by informational messages on site about social aspects of the department activity: competitions for schoolchildren "Find yourself in marketing"; celebration of Marketing Specialist's and Innovator's Day (department graduates Masters in 2 specialties – "Marketing" and "Management of Innovative Activities") inviting representatives from public organizations, public informing by mass media etc; students' and lecturers' participation in social projects and programs of the local, regional, national and international levels etc; department students' sport achievements of the highest level (European and world winners and prize-men).

7. *Business-image* of Department. It is formed through representing of information concerning business and fiscal agreements, fulfilled by the department; international projects, particularly, by Tempus program; citation indexes of lecturers', assistants', graduates' scientific works; lecturers' membership in the national professional associations; growth of amount and extend of the department scientific and practical conferences participants' geography; extend of domestic and international authors geography, who publish their works in the scientific journal "Marketing and Management of Innovations", increase of scientometrical bases amount and

geography where it is included; educational and scientific issues of department assistants; partnership with Ukrainian and foreign HEIs etc.

The efficiency of the above mentioned actions concerning image making confirms, that MMIA Department SSU is on leading places in the popular searching systems demanding «кафедра маркетингу» (in Ukrainian, because main consumers of educational service, given by department, are from Ukraine): in Google it is on the first place; in Yandex – on the second. Instruments of Google Analytics testify that site visitors are inhabitants mostly from European, Asia, and North America countries, however main part of visitors is from Ukraine.

### **3. Advance of the HEI scientific achievements with the journal site help.**

One of the effective means to advance scientific achievements (scientific knowledge) of the HEI staff is scientific issue, especially scientific periodical journals. Published there scientific and applied investigations may be the grounds for the further research, they also may be introduced in the enterprise practice activity. The efficient instrument to form and extend the audience of scientific journal, practically quick and with minimal costs of coming out into any country in the world, providing of communication individualization with readers and authors is its site in the internet.

Taking it into account authors conducted the analysis of the site communicative effectiveness concerning journal “Marketing and Management of Innovative Activities”<sup>4</sup>, edited by MMIA Department SSU since 2010. Google Analytics instruments were used for the analysis.

1. The analysis of site visitors geography showed, that they presented most world countries on all continents (except Antarctica). The main part of the audience is Ukrainian-speaking visitors (72, 24%), then are English-speaking (14,41%), and after them – Russian-speaking (7,99%) visitors. The information is given for December 31, 2013. Moreover, English-speaking visitors’ part was increased 3 times since site appearance (2011), mainly, owing to Ukrainian-speaking ones. It means that foreign visitors show their interest for journal more.

2. The sex structural visitors analysis showed, that 54,15% were men, and 45,85% women. The main comparative part of journal site visitors (33,5%) includes people 25-34 years old (undergraduates, young scientists and practitioners), then (28%) persons 35-54 years old (scientists, businessmen, practitioners), after them (27,5%) persons 18-24 years old (students and graduates of the first year). Thus, age and sex structure of visitors corresponds to the most active part of scientists and practitioners in innovative management and marketing of innovations.

3. The analysis of visiting dynamic shows, that there are constant site visitors. It is confirmed by growth of the visitors, who visit site from a few score (one or three times per

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<sup>4</sup> <http://mmi.fem.sumdu.edu.ua/>

week) to a few hundreds (1-2 times per day) times per year, and also by growth of time, during which visitors are on site: from 1-3 to 30 minutes. The whole quantity of unique visitors was stabilized with approximately 14 thousand visitors per year.

4. The analysis of traffic sources shows, that journal site is available from the popular searching systems (Google, Yandex), reforming and indexing bases in which the journal is included (DOAJ, Scholar Google and other), National Library of Ukraine site, SSU repository etc. It argues that policy of the journal entrance to the reforming and indexing bases is right, and the structure of journal site and its content is rational.

5. Research of the specific concerning journal search visitors' queries demonstrates, that they relate to the theme of its chapters and separate articles, titles of some articles, authors' surnames etc. Analysis of navigation statistics on site testifies that visitors are interested in journal articles archives; therefore the difference in the amount of separate numbers review doesn't exceed 25%. The visitors are also interested in sections, which concern requirements for article, news appearance on the main page of the site. Thus, the journal site is interesting both for readers and authors' of the articles. As for the language, the Ukraine-speaking version is the most popular on site, then it is English-speaking, and after that – Russian-speaking.

6. To estimate the productivity of journal site use in order to advance SSU scientists' studies in marketing of innovations and innovative management, there were used official data from international reforming and indexing bases. Google Scholar instruments for December 31, 2013 showed 396 references on journal articles. Girsh index – 7, ten year's level Girsh level 3.

According to IndexCopernicus Journals Master List (Poland) data journal has index 6,43 in 2012. It is the sixth place among all Ukrainian journals, indexed in this base. The journal is also indexed and reviewed in the following bases: DOAJ; Ulrichsweb; Research Bible; Academic Journals Database and others. Its articles are presented on site of the National library of Ukraine and SSU repository.

Dozens of thousands reviews and downloads of its articles both on journal site and on reforming and indexing bases sites testify its popularity.

#### **4. The role of the social networks in HEIs scientific and educational service advance.**

Taking into account the growing popularity of the social networks, especially among youth, MMIA Department created groups in networks VKontakte (3 groups), Facebook (1 group), Odnoklasniki (1 group) etc. There is intensive exchange of the actual information in them; users may very often come to MMIA Department site and to Journal "Marketing and Management of Innovative Activities" from them.

The audience is different in the social networks. In the network V Kontakte mainly young people till 25 years old communicate (schoolchildren, students, and graduates). One of the groups V Kontakte is oriented for schoolchildren – future students. Its number includes 4 thousand people. Taking into consideration, that annual number of school-leavers is 12 thousand persons in Sumy region, this group involves practically all schoolchildren, interested in specialties of MMIA Department. The second group is oriented on the participants of the regional contest for schoolchildren “Find yourself in marketing”, held by department each year. It consists of more than 2 thousand members and is used for making popular the specialty “Marketing”. The third group (over 1500 people) is for Sumy region and Ukrainian HEIs post-graduates, who have Bachelor degree of any profession and is used to popularize Master specialty “Management of Innovative Activities” which they may choose while entering the university.

The group in Facebook is for persons elder than 25 years: post-graduates, students’ and graduates’ parents, enterprises and establishments specialists, businessmen, colleagues from other HEIs etc. Its role is to popularize and strengthen image of MMIA Department: its achievements, studies, scientific and educational service etc. It helps to communicate with colleagues and interested people and include dozens of thousands participants both from Ukraine and other countries.

The group Odnoklasniki is created recently. Its task is to contact with schoolchildren’s and students’, post-graduates’ parents.

One should mention that administrators of site actively use SMO and SMM [Ilyashenko, 2011] who foresee site optimization in social networks, advance in social networks etc. You may come to some open groups of the department in social nets V Kontakte and Facebook from site. All news, presented on the department site, simultaneously is shown in the social nets. Great number of the department group members (the biggest among all SSU departments) confirms its popularity and image.

The viral marketing modes are used to popularize the image and events of the department in the social networks.

### **Conclusions.**

1. The MMIA Department experience is shown through using of internet-technologies for scientific and educational service advance. It is shown that their use allows to advance this service rapidly and with few costs at the domestic and foreign markets, involve the most distant target groups, provide communication addressness with their representatives.

2. The authors prove, that the necessary condition to conduct the active work in virtual environment is a level of internet-culture, which is observed as a motivational mechanism to



activate HEI and its divisions work in internet-space. Also they suggested author's approach to determine the HEI concept and structures of the internet-culture, investigated methodic grounds to estimate its levels, carried out their approbation on the example of MMIA Department SSU.

3. The peculiarities of HEI site use as instrument for its image making is also presented in the article. The experience to use MMIA Department SSU site while forming and strengthening its image aspects is also revealed.

4. Authors of this article show the results of analysis to use effectively MMIA Department scientific journal site to advance its assistants' scientific achievements at the domestic and foreign markets.

5. The social networks role to advance HEI scientific and educational service and peculiarities to use it at MMIA Department SSU is demonstrated in this work.

The received results prove high efficiency of internet-technologies use to advance scientific and educational service of HEI at the national and foreign markets. Further investigations have to be oriented on the development of methodic approaches to the cost estimate of internet-technologies communicative effectiveness in the HEI scientific and educational work.

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