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OF E-MARKETING EFFECTIVENESS**



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## HOW TO EFFECTIVELY PROMOTE UNIVERSITIES AND RESEARCH INSTITUTES IN THE NETWORK? PSYCHOLOGICAL MECHANISMS OF E-MARKETING EFFECTIVENESS

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### Summary

Universities and research institutes more and more often resort to promotion tools up till now used mainly in business. Omnipresent market competition has reached also the area of science, where more and more often the fight for students and money for scientific research takes place. Competition among science institutions is additionally stimulated by demographic factors — the gradual aging of the European society. As data from the Central Statistical Office show, the number of people aged 19–24 in Poland will drop from 2,817,000 in 2015 to 2,135,000 in 2025. The reduction of the number of young people will substantially boost competition between universities. Their success, similarly as success in business will depend to an ever greater extent on the quality of conducted marketing activities. Education and research have become a product which, just like any other product, has to "fight" for the client.

**Keywords:** research institute, university, promotion, psychology, e-marketing, internet, social media



## Marketing in research institutes and higher education institutions

Marketing activities taken up by research and scientific institutions is an increasingly popular subject of debates and scientific works from the area of management and education. What shows this trend very well is not only the growing number of scientific publications concerning these subjects<sup>1</sup>, but also the appearance of scientific magazines, titles dedicated to this issue (eg. *International Journal of Educational Management*, *Journal of Marketing for Higher Education*). In many contemporary works concerning marketing of higher education institutions and research institutes, models functioning in the business environment are being adapted to serve the needs of educational units. Thus, in works concerning management strategies for educational organizations we can find references to such classic concepts as 4P, 7P or 4C. Adapting classic marketing models, applied in business, to the conditions in which higher education institutions and research units function, shows that the managers of these institutions see the need to compete on the market and determine the direction of marketing activities<sup>2,3</sup>. It can be presumed that this need will be constantly growing, along with the growth of competition between higher education institutions. This competition will result from, among others, demographic factors, including the predicted drop in the number of people aged 19–24. According to the forecasts of the Central Statistical Office<sup>4</sup> the number of people in this age range in Poland will drop from 2.817.000 in 2015 to 2.135.000 in 2025. Dropping number of students and the resulting growth of competition between universities will force them to adopt a strategic approach to marketing activities and using the latest achievements of interactive marketing. Including intensification of online activities.

### Online marketing

Nowadays Internet is the fastest-developing channel of marketing communication. There are various terms: marketing activities online, Internet marketing or interactive marketing. The goal of this article is not to define and distinguish between these terms, however, it is worth



pointing out that contemporary Internet marketing isn't limited to just the activities associated with using websites. It pervades the sphere of life of every person by means of social websites and the increasingly popular mobile devices such as smartphones and tablets. For this reason in this article all marketing activities using Internet as their medium will be called interactive marketing.

One of the most important factors influencing the development of interactive marketing is its diversity and rapid development of social websites. Their emergence has enabled the creation of a new quality of communication between the organization (company, university, authorities) and the customer. From that moment not only a company or a university, but also clients/students are the producers of information<sup>5</sup>. Social network marketing has changed the shape of contemporary Internet communication to such an extent that now we are unable imagine functioning in the media sphere without such websites as Facebook or NK (formerly *nasza-klasa.pl*). The best evidence of popularity of these websites are statistics concerning the number of users. According to a survey of Megapanel for August 2011<sup>6</sup>, NK.pl group has about 12 million users. The second most-popular social website — Facebook — also has over 12 million users. Such huge involvement of Internet users in social media gives marketing specialists huge opportunities for reaching their target groups with information. According to the survey Social Media Brand Index 2010<sup>7</sup>, among all social networks Facebook, YouTube and NK.pl provide the biggest opportunities in this respect.

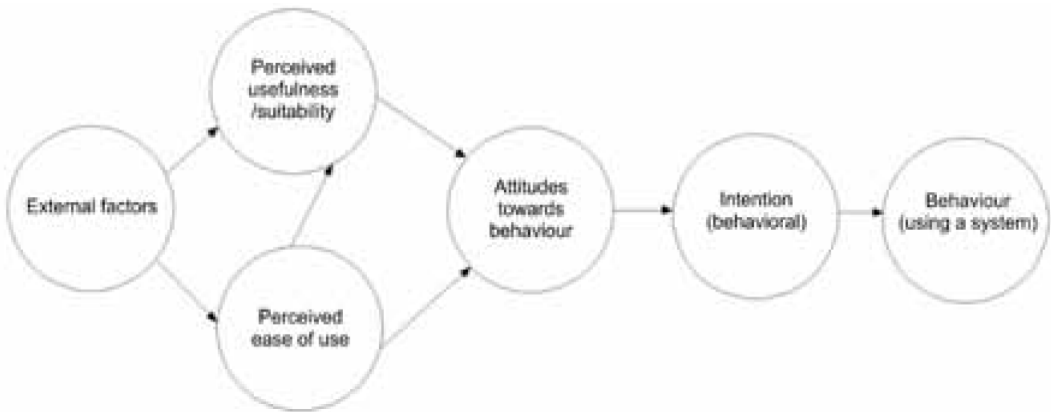
Obviously, contemporary interactive marketing offers a broad scope of possibilities, which goes beyond the most popular social networks, to organizations which want to reach a specific audience. However, apart from using particular tools, it seems that much more important is to determine the goals of an organization's presence in the space of Internet. It is also necessary to find out what actions can allow us to achieve these goals. Whereas defining goals of marketing activities depends on the characteristics of a particular organization, the efficiency of particular actions will result from general rules of functioning of Internet users and their reactions to various kinds of messages. Contemporary psychology, which through research is trying to describe, explain and predict the behaviour of Internet users, can allow us to answer some of the questions about the mechanisms of efficiency of interactive marketing.

The goal of this article will be to discuss the most important theories in contemporary psychology, which explain the functioning of Internet users, and to present the possibilities of using these theories in practice in marketing activities of higher education institutions and research units.

## Technology Acceptance Model

One of the most important theoretical models explaining the users' utilization of various kinds of information and communication technologies is the Technology Acceptance Model (TAM) invented in 1986 by Davis<sup>8,9</sup>. This approach is based on the theory of reasoned action developed by Ajzen and its extended version — the theory of planned behaviour<sup>10,11</sup>. All of these approaches assume that behaviour, in this case using applications or websites, is determined directly by the declared intention (behavioral intention to use) of users to take up a particular action. The most important element of the Technology Acceptance Model are factors explaining this intention. Among these factors there are users' attitude towards using software (Attitude towards use) and its perceived usefulness for the user (Perceived usefulness). These factors directly determine the intention of using a particular technological solution. Technology Acceptance Model assumed yet another factor influencing the intention by means of attitude to use. This factor is the perceived ease of use. The theory by Davis also assumes that other variables, which are not included in the model, may have an impact on the discussed ideas. The author includes in these variables a series of factors which may modify the perceived ease of use and perceived fitness for purpose. In fact, we could include all influences which may change the users' attitude to the contents and functions provided by software and those which facilitate use. For example, we can mention here such variables as additional computer trainings (determining the perceived ease of use) or directions included by the producer, as well as the availability of other sources of information or the quality of materials offered by a particular service (influence on the perceived usefulness). Picture 1 presents the original version of Technology Acceptance Model in form of a structural diagram.

Picture 1. Technology Acceptance Model



Many authors have tried to develop the presented approach with further factors allowing us to better understand the behaviours of users. One of the most important factors is the pleasure felt by users during usage. Researchers most often call it perceived enjoyment and perceived playfulness<sup>12</sup>.

Due to its general character and the possibility to apply to various contexts of use of information–communication technology, the technology acceptance model allows us to understand various aspects determining the involvement of users. The perceived ease of use will be shaped by a website's interaction design, its architecture of information and mode of functioning. The significance of this area will be discussed in latter part of the article, in course of the analysis of Norman's model of users' behaviour<sup>13</sup>. The perceived usefulness of a particular website or software will be directly associated with the quality of contents delivered to the user. At the same time perceived enjoyment will be associated with the so-called user experience design, that is, with design which not only provides interesting content, but also focuses on the enjoyment and satisfaction of users.

### Perceived usefulness — practical application in marketing of research and scientific institutions

The perceived usefulness of a particular service, for example a website, is determined above all by contents it delivers to the users. The more these contents are useful from the point of view of an Internet user, the more



willing he is to return to the website. Companies have mastered this strategy very well, by offering to Internet users articles, branch reports or results of their research, as well as corporate blogs for free. Such marketing activities are regarded by potential clients as a much more positive than intrusive advertising, for example, in form of banners.

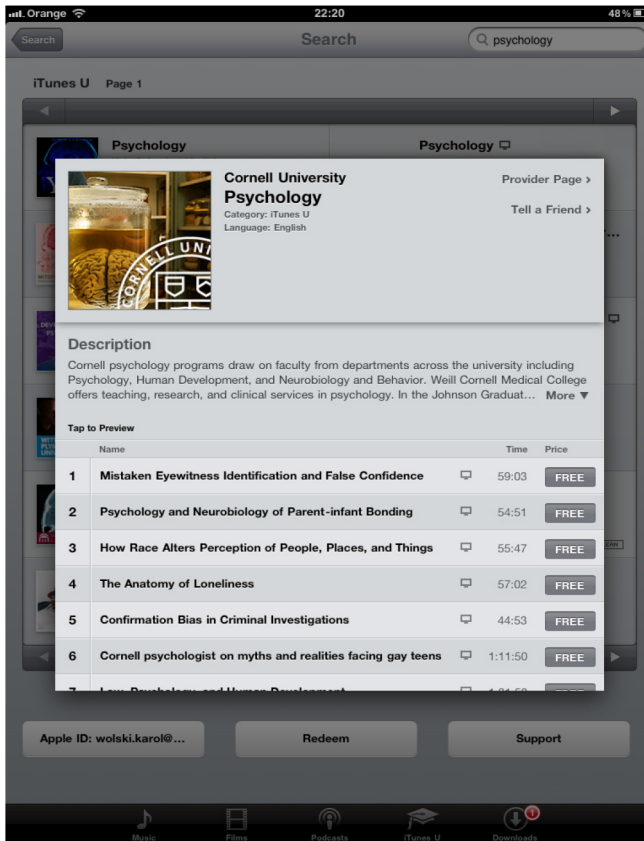
After all, users receive certain value — information — and what's more it's completely for free. Thus the strategy of companies involves providing users with useful data so that in the future they not only return to the company website, but also thanks to getting a "free sample" use the company's services or buy its product.

Obviously, universities and research units can also apply this strategy, moreover, it seems that this strategy is fully natural for them. After all, these organizations provide the society with knowledge, this is one of their main functions, thus this type of marketing should come as no surprise in their case. However, it is important in what way this knowledge will be delivered to users.

The way knowledge should be presented in the 21st century in order to build up positive attitude of users, has been recognized very well by some American universities. An example here is Cornell University, which by means of the popular iTunes service by Apple Inc. Provides users of computers, mobile phones and tablets of this company with free lectures on the basics of psychology. Every user of iTunes software (also on PC computers) can download the recordings for free. Picture 2. shows a screenshot of the discussed example.

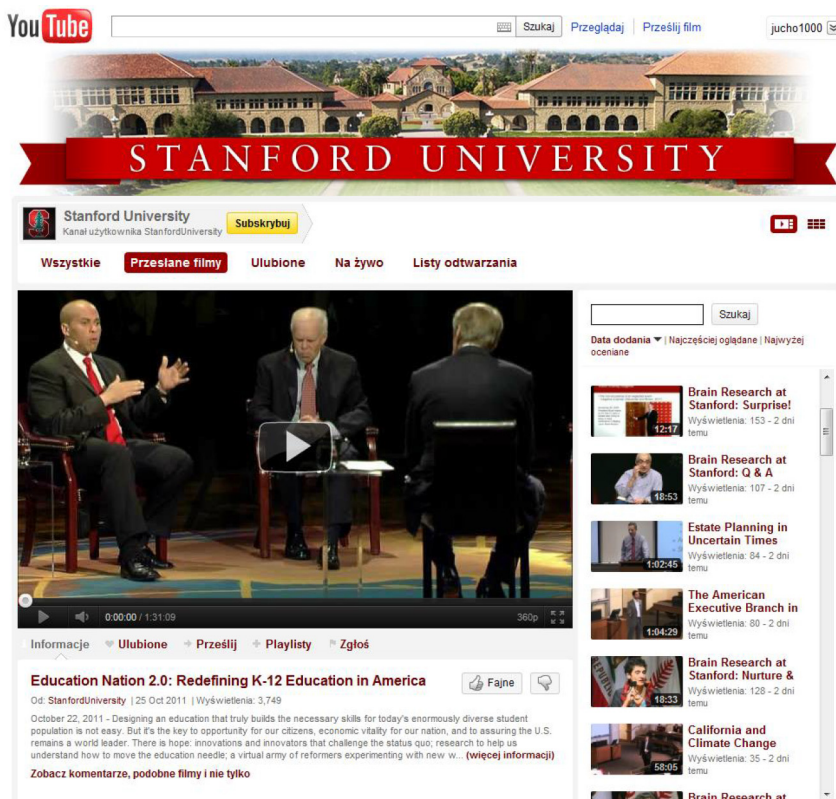
Looking through resources available on iTunes we can find a series of recordings prepared by various universities. Their common trait is popularization of scientific knowledge and building up the brand of the university delivering the content. Another example of using a similar strategy are YouTube channels prepared by universities and research units. Their advantage over using iTunes as a channel for distribution of content is easier access to users. Not every Internet user has iTunes application, especially if he uses Windows OS. At the same time YouTube channels are available through any Internet browser. One of the best-prepared and most popular channels is the one run by Stanford University. In November 2011 the channel registered over 3 million views and all videos published on the channel have been viewed over 33 million times. Picture 3 is a screenshot of the discussed YouTube channel.

Picture 2. Educational videos concerning psychology, offered by Cornell University by means of iTunes application



Using videos popularizing knowledge is not only an interesting way of promoting universities, but its also a comparably inexpensive way. Most services allowing us to publish recordings are either free or charge small fees for additional options allowing, for example, to change the graphic design of the channel. Additionally, preparing the recordings themselves is not associated with excessive costs either. Recordings published by many universities often come from conferences organized by the universities and lectures of invited professors, and thus, preparing these videos doesn't require additional spending. For example, the most popular video on the channel of Stanford University comes from a lecture given by Steve Jobs at the graduation ceremony in 2005 (in November 2011 it was viewed over 12 million times).

Picture 3. Stanford University channel on YouTube



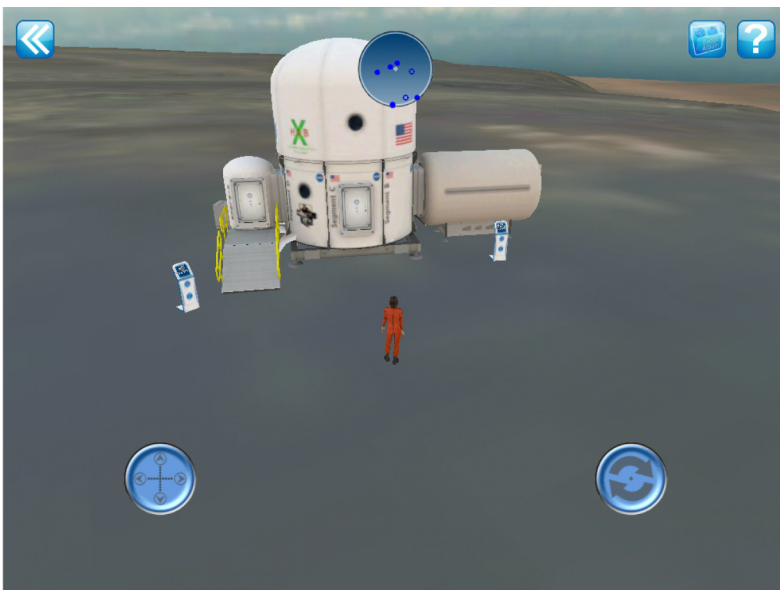
Contents interesting for users can be delivered by universities not only by means of videos. Some of them, like *Massachusetts Institute of Technology* (MIT), offer to Internet users free e-learning courses, thanks to which they can not only gain knowledge, but also feel they are part of a prestigious university. Another idea for attractive promotion by delivering knowledge to users, which is used by MIT and in particular by *MIT Sloan School of Management*, is an application granting the users of devices from Apple Inc. free access to *MIT Sloan Management Review* — a business periodical published by the university. The application is distributed through the App Store service

The above-mentioned examples are not enough to cover all possibilities the Internet gives universities and research units with regard to promotion through providing content. However, they are examples of some of numerous innovative applications of new technologies for marketing purposes.

## Perceived enjoyment of use — practical application in marketing of scientific and research institutions

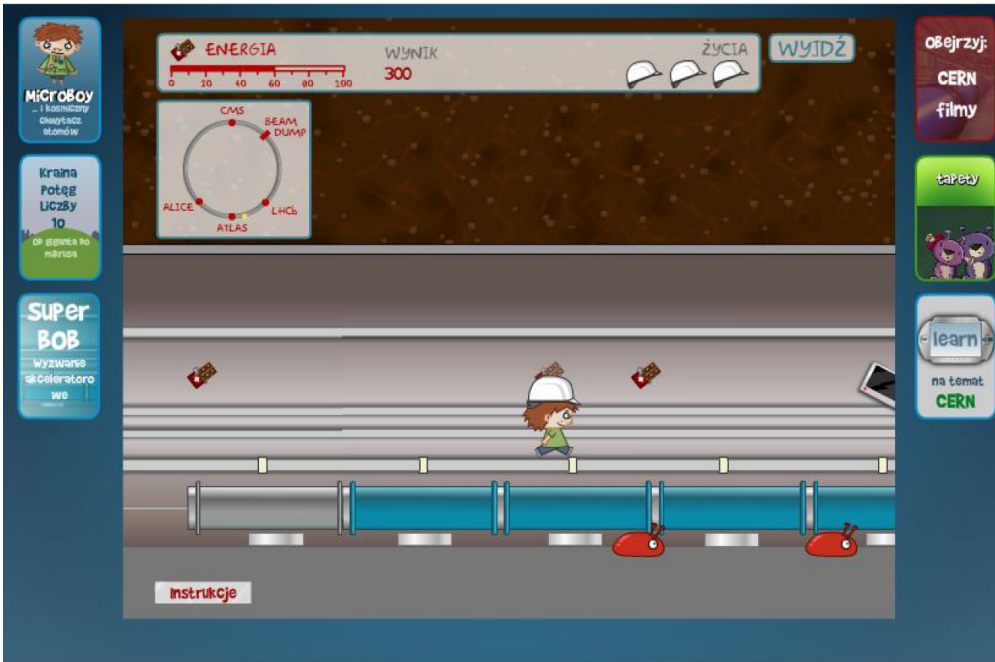
The perceived enjoyment of use refers to positive feelings of a user during the use of a particular medium<sup>14</sup>. The more enjoyable the experience, the more likely it is that a user will return to particular software or website. All marketing activities conducted by research institutions and higher education institutions will thus be subject to the implementation of marketing strategies by providing users with enjoyable experiences and associating them with the name of an organization. A great example of this kind of approach is a series of applications prepared by NASA (*National Aeronautics and Space Administration*) and distributed by means of App Store service. These applications allow users to find out many facts concerning the solar system and the agency itself. The applications are interactive and give the opportunity to explore resources in a way interesting for the user. One of them — *NASA Desert RATS 2011* — allows users to take a virtual walk on a desert and learn about the equipment scientists use for research. The application is free of charge for all users. Picture 4 shows a screenshot of the discussed application.

Picture 4. NASA Desert RATS 2011



Another example of providing users with enjoyable interaction is the website prepared by CERN<sup>15</sup> (European Organization for Nuclear Research). The website is targeted at the youngest Internet users. The website contains animations and simple educational games, which provide basic knowledge from the area of physics and try to attract children's interest to the subject. Thanks to the website children can make a tour of the Great Hadron Collider playing SuperBob game or learn about raising numbers to a power, by watching the world from various perspectives and raising the number 10 to following powers. Picture 5 is a screenshot of the discussed educational game.

Picture 5. Super Bob game at www.cernland.net



The presented examples refer to two factors included in the Technology Acceptance Model: perceived usefulness and enjoyment of using a system. As theory shows, both these factors shape positive attitudes of Internet users. Attitudes have a direct impact on the declared readiness to further use a particular IT solution. The model

proposed by Davis includes yet another factor, which is very important from the point of view of involvement of users, namely, the ease of use<sup>16</sup>.

## Perceived ease of use

For many years of development of information technologies the basic problem of scientists — IT specialists — has been to create technology that could replace human in carrying out the most mundane and time-consuming tasks. Scientists focused on expanding the processing power of produced computers and at the same time neglected the ease of using them. At the beginning of the era of development of computers, it was clear that only specially prepared specialists would be using computers. Everything changed following the emergence of personal computers, which were designed for home use (the history of development of IT technology can be found in the book titled *Tools for Thought*).<sup>17</sup> Designing personal computers posed new challenges for programmers — creating a computer easy to operate, so that everyone could use it. Alan Cooper was one of the first people to highlight this problem. He asked what happens when devices everybody knows very well are equipped with a computer. His answer was always the same: they turn into an incomprehensible computer which it is hard to operate<sup>18</sup>.

Along with development of technology, this incomprehensible computer had to become a user-friendly computer. An era of designing focused on the user, that is, an approach to creating software where the user and his impressions are in the center of attention, started. One of the first psychological approaches analyzing the interactions of human with the computer is Norman's model of users' behaviour.

## Norman's model

Before we discuss the theoretical basis of designing focused on the user, we should have a look at the terminology used in this area. Two key terms are functionality and usability<sup>19</sup>. The first one refers to the availability of certain functions of software, however, it says nothing about whether these



functions are easy to use and deliver satisfaction to the user. Usability refers to the ease of using software, the ease of learning the skill of using software, remembering the gained knowledge and user's satisfaction. It has a completely different meaning than in case of usefulness of the Technology Acceptance Model. In the discussed area the term of usability refers to such software that not only delivers particular functions to the user (functionality) but additionally does it in a simple and comprehensible way giving the user satisfaction from utilization. Usability understood this way is directly associated with the factor of perceived ease of use in the Davis' model of and correct system design resulting from Norman's model.

Norman<sup>20</sup> in his model tries to describe the general mechanism of behaviour of users regardless of the device they use. Every behaviour of the user can be analyzed considering two aspects: execution and evaluation. Execution is nothing else but a particular behaviour of an individual, evaluation is a comparison whether the result of this behaviour complies with the result expected by the user. Thus, the behaviour of the user consists of seven subsequent steps:

1. Formulating targets,
2. Intention of action (execution),
3. Defining the sequence of actions (execution),
4. Executing the sequence of actions (execution),
5. Perception of the real condition (evaluation),
6. Interpretation of the real condition (evaluation),
7. Assessment of the result of action — assessment of the result of interpretation (evaluation).

If the assessment of the result is negative (the goal hasn't been achieved), the action is repeated with a certain correction allowing the achievement of the expected result. This way the individual using a particular device achieves the defined target through iteration. If the result is achieved, the goal is reformulated and engagement in another activity takes place.

In order to allow the user to achieve his goals without any problems, according to the above pattern, it is necessary to close the circulation of information in the area of external world and the area of cognitive

processes. If such a circulation of information is broken (for example by flawed design of the system or device), there may be problems in the interaction between human and computer. These problems may arise from two kinds of design maladjustments, the so-called gulf of execution and the gulf of evaluation. The first one is the appearance of discrepancy between the intentions of a user and the actions that can be taken and which are allowed by the software or device. It refers to the difficulties appearing in the process of defining goals and actions necessary to achieve these goals. An example of a gulf of execution is a device, which can be launched only thanks to a series of actions the user didn't expect. The gulf of evaluation refers to the effort a user must make in order to interpret the current state of the device and answer the question whether the defined goal has been achieved. An example of a gulf of evaluation are devices, which don't provide sufficient amount of information allowing for the assessment of actions taken by the user. The goal of software designers is to reduce these gulfs through proper design of the system in the areas of execution and evaluation.

A well-adjusted area of execution allows users to formulate targets, define the proper sequence of necessary actions and gives support in the area of proper execution. A well-designed area of evaluation enables immediate confirmation of the result of the taken actions. What's important is that the confirming message has to be intuitive and unambiguous in reception. For proper evaluation of the current state it is also necessary to provide information showing the distance of a user from achieving the defined target. Areas of execution and evaluation designed this way enable trouble-free utilization of software or device.

### **Perceived ease of use — practical application in marketing of scientific and research institutions**

A useful website of a research unit will allow the user to execute his desired tasks simply and quickly. To make it possible the website has to be well designed both in terms of execution and evaluation. Building useful websites will, however, serve a different function in the marketing of universities, than designing focused on eg. providing the user with high-

quality content. As much as in case of high-quality content, its authors want the user to appreciate their effort and assess the content positively, a well designed website should be "transparent" for the user<sup>21</sup>. Useful software is not visible in that it allows the user to carry out tasks important for him without diverting his attention from these tasks. Software becomes a secondary issue and the most important goal is satisfying the needs of the user. In practice it means that a useful website of a university is a necessary condition for proper marketing communication. However, it is not a sufficient condition. A useful website should not draw attention. A badly-designed website will surely cause the user's frustration and won't have a positive impact on the image of the unit it represents.

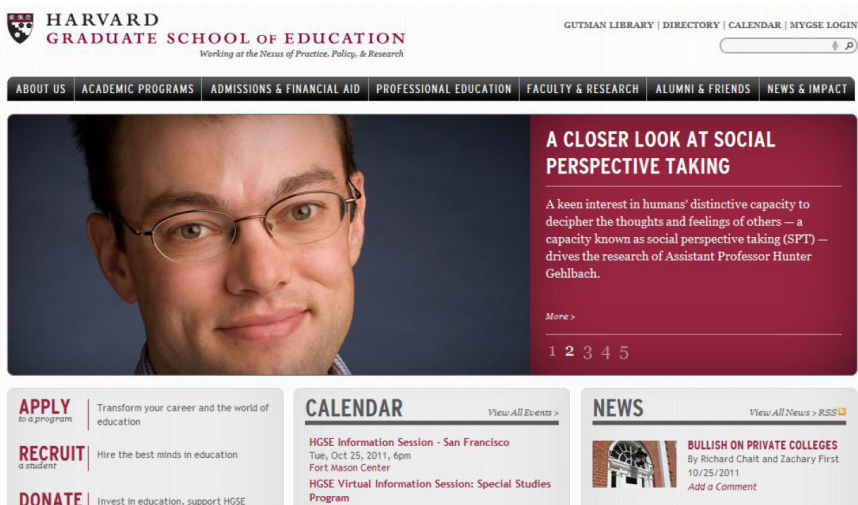
The usefulness of a website refers to most of its elements and requires a strategic approach to this problem on all stages of building the website. Among the most important areas which require particular attention of the designers, there are: composition of particular elements on the main page, architecture of information, navigation as well as forms and additional applications (eg. applications allowing users to participate in e-learning courses)<sup>22</sup>. Due to a very broad range of possibilities of applying knowledge on usefulness in designing websites of universities and research institutions, only the selected basic rules of useful design will be discussed. An indepth analysis of the issue can be found, among others, in the work of Alana Coper and his colleagues — *About Face 3 — The essentials of interaction design*<sup>23</sup>.

### Usefulness of websites — basic rules

One of the most important goals of a website is attracting the attention of the user who visits it for the first time. This particularly concerns home page, which most often is the first page to be shown to the user. As research<sup>24</sup> shows an efficient way to attract the attention of the user is placing on the website a photograph of people looking straight into the camera lens. This creates the impression that people from the photograph are looking straight into the eyes of Internet users. People will naturally focus their attention on someone who is looking at them. This way they will

devote more time to the visited website, which maximizes the chance that the website will serve the purpose assumed by the designer — for example that it will inform about a new post-graduate course. Such move is a much better solution than posting the photographs of a building, even the most modern buildings, on the main pages of universities. This rule was successfully applied in case of the website of Harvard Graduate School of Education (picture 6).

Picture 6. Main page of Harvard Graduate School of Education



People's faces on photographs not only attract the attention of users, but they may also direct the attention of users. People are inclined to pay attention to the elements other people are looking at. This relation is common in everyday life. When a few people are looking in one direction, most of us will automatically look in the same direction to see whether something important is going on there. Companies advertising their products comparably often use this mechanism showing a group of people looking in one direction, eg. at a particular company's logotype. This way the customer's eyes naturally turn in the same direction<sup>25</sup>. This mechanism can be found among others on the website of University of Leeds (Picture 7). The eyes of the user naturally follow the look of the person on the photograph and arrive at the information the university wants to convey.

Picture 7. Photograph used on the website of University of Leeds



Managing to attract and keep the user's attention for a longer while is one of the most important purposes of a website. This rule refers both to companies' websites and the websites of universities. Obviously, there are many techniques helping to achieve this goal and the presented solutions are characteristic examples of them. However, the work of the designer of a university website isn't limited to creating an image attracting the attention of an Internet user. In fact, it is just the opposite, as it is at that point that his work actually begins.

The most important purpose of any website is to allow the user to satisfy his needs in a possibly easy and non-frustrating way. In case of universities such needs may involve looking for information or signing up for a course. Every website should aid the user in carrying out the tasks it was created for. This naturally requires appropriate design. It is possible as soon as the designers learn about the habits and the way of thinking of Internet users<sup>26</sup>.

**Users appreciate quality and credibility:** For most Internet users the most important issue is high quality of contents provided by a website. This is confirmed by the Technology Acceptance Model (perceived usefulness). If the website of a university or a research unit provides them with important, accurate information, they will be willing to "forgive" poor graphic design or structure of the website.

**Users only scan websites, instead of reading their contents:** People comparably rarely read longer texts directly from a computer

screen, that's why they search for visible places on which they can focus their eyes. Their attention goes from one such point to another — an anchor.

**Users are impatient and don't like to delay gratification:** Most Internet users quickly abandon a particular website if they don't manage to achieve their goal quickly and easily. Every obstacle raises the chance that they will abandon the website and won't visit it again.

**Users want to have control:** For Internet users it is important to have the feeling of control over their use of websites (as in Technology Acceptance Model). One of the biggest flaws in designing websites is allowing a situation in which users feel stupid, because they are unable to do something. They blame themselves for insufficient knowledge, even though it's actually the designer's fault<sup>27</sup>.

User-centred design taking into consideration the users' way of thinking and behaviour allows us to create websites which for them are easy to use and enable them to achieve goals important for them. This simplicity should be present in every element of the project, from a clear and sensible layout, through navigation to forms allowing them, for example, to register. Detailed guidelines concerning the composition of particular elements of websites can be found in works by Kasperski<sup>28</sup>, Kalbacha<sup>29</sup> or Cooper and colleagues<sup>30</sup>.

## Social impact

Both the Technology Acceptance Model and Norman's approach describe behaviour and motivation of users during use of various types of devices and software. Both of these theories treat the user as an individual functioning independently. However, as research from the area of social psychology shows, people always functions in a social environment and are always subject to the influence of other people.

People often behave in a way other people suggest them to behave. This happens often especially when they are not sure about their opinion or don't know how to behave. Let's imagine a situation in which a man enters a flower shop to buy flowers for his girlfriend. It turns out he is a florist and



the choice of the right kind of flowers is quite a big problem for him. At a certain moment the seller who notices the man's confusion, suggests: "Take irises, they are fashionable now, many people buy irises". After a while the man actually decides to buy irises. The mechanism which made the man purchase flowers recommended by the seller is called by psychologists the social evidence of rightness<sup>31</sup>. When people don't know what decision they should make, they often follow the suggestions of other people — this is how the mechanism works. In the above-mentioned example the seller suggested that certain flowers are fashionable and popular. This mechanism is often used by organizations in Internet marketing. A great example of it is the use of social media for marketing.

Rapid development of such websites as Facebook can be explained, among others, with the rule of social evidence of rightness. A user who notices that the profile of some university is "liked" by a big number of people, assumes that it may be interesting also for him. If so many people follow information published on this profile, the information must be interesting.

This way every following person who joins a particular profile makes the profile even more attractive for further users. Nowadays, many universities and research institutions use this mechanism for the promotion of their activities in the social media. One of universities using this channel of promotion most efficiently is Harvard University. Over 985,000 people "like" the university's Facebook profile.

Another example of using knowledge from the area of social psychology in the marketing of research and scientific institutions is the application of a rule that says that people feel the pressure to submit to authority. This rule was shown very well in the classic research by Milgram<sup>32</sup>. In the experiment people were subject to pressure from the researcher (authority), who told them to continue participating in the experiment, despite their strong opposition. The participants were supposed to teach another person and later check the person's knowledge. For every wrong answer the participant was supposed to punish the student with an electric shock (naturally the students weren't really receiving electric shocks, however, the participants thought they were receiving shocks). After a few attempts some participants wanted to abandon punishing others with electric shocks, however, the researcher insisted. It turned out that most

people submitted to the pressure and carried out the experiment till the end. Milgram showed in his laboratory how much normal people are susceptible to the influence of people they regard as authorities. This rule is very often used in advertisements by companies producing pharmaceuticals, toothpastes or tooth brushes. In advertisements of this kind we can often see doctors, dentists or actors playing such roles. This is one of the simplest ways of using submission to authority in product marketing. Other companies, for example, producers of sports clothing, act in a similar way by employing well-known sportsmen to advertise their equipment. Obviously, this rule can be easily applied to the promotion of universities and other units dealing with scientific activities. Many universities employ professors, who enjoy high esteem not only in the academic environment, but also in the society in general. These people may be great ambassadors of universities. In Poland this strategy has been applied by University of Social Sciences and Humanities in Warsaw (SWPS), whose lecturers appear in the media to explain to the audience various social phenomena. Another way of using the rule of submission to authority in the marketing of a university is associating a well-known person, who is not necessarily an employee, with a particular institution. An example of this kind of action (the action was not necessarily deliberate) may be the article published in Harvard Gazette<sup>33</sup>, in which the visit of the founder of Facebook — Mark Zuckerberg — to the university is described.

## Psychology and Internet marketing

As the above-mentioned examples show, many theories or psychological phenomena can be successfully used for building and implementing the marketing strategy of scientific and research institutions. Such theories as the Technology Acceptance Model served well the purpose of explaining the behaviour of users. They also have their practical implications for people designing marketing influence. The application of knowledge from the area of social psychology is similar. Many mechanisms, like the social evidence of rightness, are good for interactive marketing. Good choice of these mechanisms and fitting them well into the entirety of activities aimed at promoting an organization, can contribute to raising the efficiency of influence.

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