The Internet in the survey execution process

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When focusing on Internet research, we should make a clear-cut distinction between research on the Internet as a medium, and Internet-based research, i.e. research conducted on-line. The former can be carried out in two ways: either using traditional off-line research methods or relying on the Internet itself. The choice depends on the subject matter of the research which determines the most suitable method to obtain the responses to the questions asked.

The research on the Internet (as in the case of other media) can take into consideration various aspects of the medium as well as various levels of its development[15]:

- Stage 1: *The medium itself.* We seek answers to the following questions: How does the medium operate? What functions does it offer to the user? What makes it similar to other media?
- Stage 2: *The use and users of the medium.* The research is conducted when the medium is already fully developed. We try to answer the following questions: How do individual users use the medium? What benefits and risks are connected with the medium? Who uses the medium?
- Stage 3: *The effects of the medium.* What sociological, psychological, and physiological effects are linked to the medium? What do users expect from the medium? How does the medium serve people?
- Stage 4: *How can the medium be improved?* How can it be improved from the point of view of the user?

The medium research process comprising these four stages is neither linear nor sequential. Each stage of the medium development allows for attempting to solve the problems characterisistic to the particular stage. This is so because research is a never-ending process, and in a vast majority of cases the completion of a research project generates new queries, neither previously expected nor identified by the researcher[16].

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[15] R. Wimmer, J. Dominick, *Mass media. Metody badań*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2008, p. 11.
[16] Ibid.

Although one may come across astronomical numbers of respondents who fill in the questionnaire within a few days or even hours[17] , there are actually only a few studies providing reliable information on the effectiveness of surveys conducted on-line. Nowadays, as Internet surveying has become commonplace, and people are flooded with dozens of various surveys (*oversurveying*)[18], the number of surveys completed and returned has dwindled to reach a trough of 5-10%[19], which is similar to mail surveys. However, the low rate of return is not a typical feature of all on-line surveys.
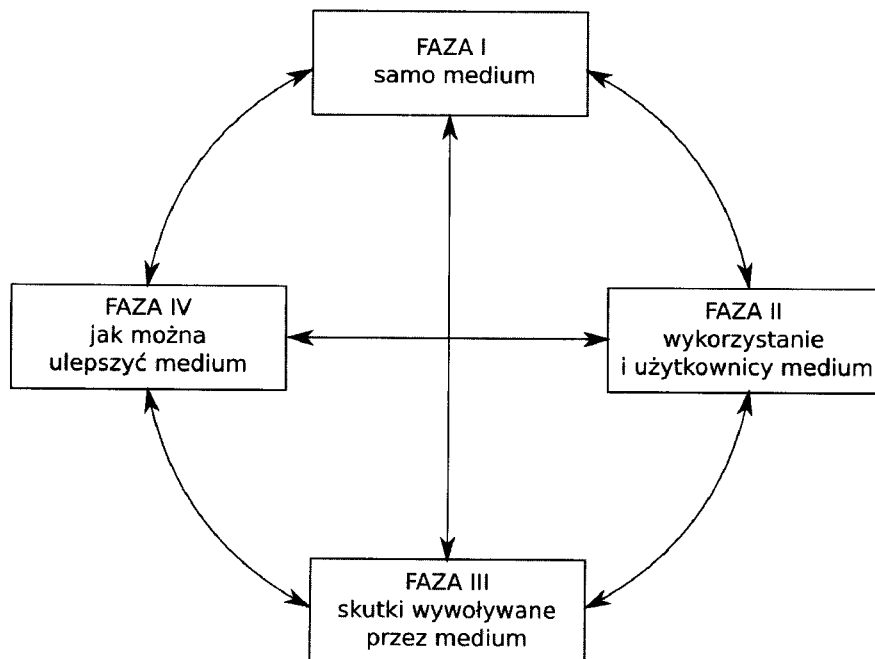
Fig. 1. Various aspects of medium research.
Source: Author's own study based on: R. Wimmer, J. Dominick, p. 11

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[17] C. Smith, *Casting the Net: Surveying an Internet Population*, 1997,
http://jcmc.indiana.edu/vol3/issue1/smith.html
[18] J. Zając, *Nieważne jak pytasz: cechy zaproszenia a skłonność do udziału w ankiecie internetowej*, in: M. Sokołowski (editor) Oblicza Internetu. Internet w przestrzeni komunikacyjnej XXI wieku, Elbląg, PWSZ, 2006, p. 168.
[19] R. Mącik, *Wykorzystanie Internetu w badaniach marketingowych*, Lublin, MCSU, 2005, p. 109 and K. Sobieszek, *Problem błędu braku odpowiedzi w badaniach Internetowych – rozważania teoretyczne*, in: Ł. Jonak, P. Mazurek, M. Olcoń et al. (editors), Re: *Internet – społeczne aspekty medium. Polskie konteksty i interpretacje*, Warszawa, WAiP, 2006, p. 358.

Very often this rate is considerably higher than in the case of those conducted off-line. Actually, the way of conducting research can considerably contribute to the high percentage of surveys returned[20]. Referring to the works of Western researchers, J. Zając and D. Batorski quote the results where the percentage of surveys completed has soared to 82%[21]. It is worth noting that higher figures are always obtained in homogeneous groups in terms of occupation, e.g. among doctors, or teachers, than in general public groups[22].

The factors determining the percentage of surveys completed can be divided into two categories:

- factors related to the respondent,
- factors related to the tool, the manner of organising and conducting the survey.

Among the respondent-related factors, the sociodemographic characteristics, including gender, age, education, place of residence, occupation, or income, come to play the key role. The level of interest in the subject matter of the research, susceptibility to persuasion, or the degree of compatibility of the respondent's views on a certain issue, and the approach to this issue in the survey, are also significant. Finally, previous research-related experience (or lack of experience) of the respondent is not without significance[23].

As regards the factors related to the tool, and manner of organising an conducting the survey, special importance is attached to the positive contacts established with the respondent, length of the questionnaire, time required to fill it the questionnaire, and appealing survey layout. The prestige of the institution conducting the research, which can guarantee respondent's anonymity and confidentiality, is also one of the key factors. Finally, the role played by the invitation letter, incentives and rewards for the survey participants, and additional prompt-notes[24], cannot be underestimated.

Successful contacts with prospective respondents increase the percentage of surveys completed. Three types of contacts with the surveyed can be distinguished, i.e. *contacts preceding the survey, contacts reminding about the sur-*

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[20] J. Zając, D. Batorski, *Jak skłonić do udziału w badaniach internetowych: Zwiększanie realizacji próby,* http://sna.pl/dbatorski/BadaniaPrzezInternet.html.

[21] W. Cull, K. O'Connor, S. Sharp, S. Tang, *Response rates and response bias for 50 surveys of pediatricians.* Health Services Research, 2005 – quoted after J. Zając, D. Batorski, ibid.

[22] P. Daniłowicz, F. Sztabiński, *Nowe spojrzenie na ankietę pocztową. Jak uzyskano 70% zwrotów,* in: Z. Gostkowski (editor) *Analizy i próby technik badawczych w socjologii,* Warszawa, 1992, vol. IX, p. 135.

[23] F. Sztabiński, *Ankieta pocztowa i wywiad kwestionariuszowy,* Warszawa, IFiS PAN, 1997, pp. 137-138

[24] Therein, pp. 138-139.

vey, and contacts verifying the survey completion[25]. The contacts *preceding* the survey are aimed at establishing some relation with respondents, arousing their interest in the subject matter, and providing certain information on the research. The contacts *reminding* about the survey are meant to draw attention of those who have not participated in the research yet. The dynamics and frequency of messages sent to respondents is different in the case of off-line research, such as mail surveys, than in on-line research. It is advised that the research conducted off-line should include three reminding mails and one initial mail. Given the specificity of the research (working hours of the post, or surveys delivery to respondents), these mails should be sent at approximately two-week intervals[26]. Certain studies indicate that irrespective of the number of returns following the first mail (e.g. 40%), each subsequent mail generates the number lower by 50% (i.e. 20% in the second round). Therefore, if we want to obtain the satisfactory 75% of returns in a mail survey (40% (first mail) + 20% (second reminder) + 10% (third reminder) + 5% (fourth reminder)), it is recommended that the respondent is contacted as many as four times[27].
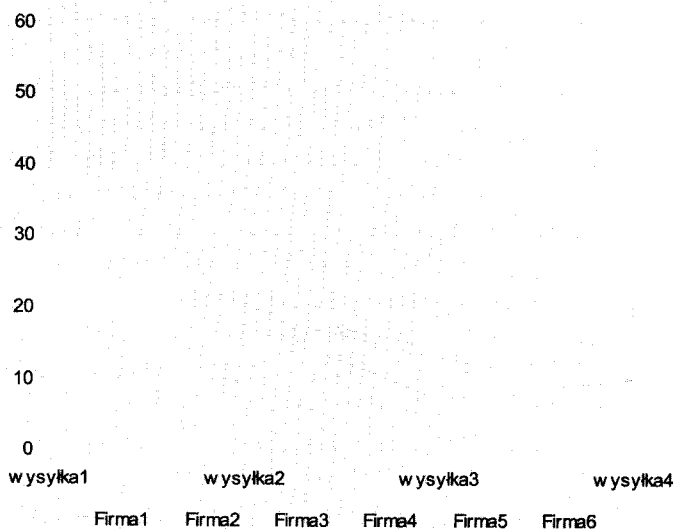
Fig. 2. The level of returns of mail surveys after four mails [in %].
Source: Author's own study, based on T. Mangione, *Ankietowanie pocztowe w badaniach marketingowych i socjologicznych*, (Warszawa, PWN, 1999), p. 89

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[25] Por. J. Zając, D. Batorski, ibid.

[26] T. Mangione *Ankietowanie pocztowe w badaniach marketingowych i socjologicznych*, Warszawa, PWN, 1999, p. 88.

[27] Therein.

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As Crawford indicates, when we decide on sending reminders to the Internet users, the messages sent at two-day intervals prove more successful that those sent every five days, which stems from "the rapid pace of the Internet."[28] It is worth highlighting that the off-line surveys, entailing four contacts with the respondent at two-week intervals, take far more time. It takes approximately 8-9 weeks[29] to collect data alone, while the Internet makes it possible to complete the entire project within one week. What is more, while sending the reminders, it is important to avoid sending them to those who have already participated in the survey. This is possible by assigning a unique link (ID) to each respondent, which makes him/her easy to be identified. If the link is attached to the invitation sent by e-mail, the possibility of one respondent filling in the same survey more than once is excluded. Once completed, any further attempts to complete the survey are deactivated and thus unsuccessful. Many tools for designing on-line surveys, such as eBadania, attach the link automatically (thanks to the cookie system). Unfortunately, there is no fail-safe way of verifying the users themselves, since it is only the browser that can be verified. This comes at play when more than one person uses one and the same browser (browser's profile). The cookie system allows for the survey to be completed only by the first user who opens the link. While this prevents multiple completion of the survey by one user, it also excludes the possibility to participate in the survey by other persons using the same browser, e.g. sharing one computer at the place of work. In case we cannot control the survey completions, the verifying contact may combine the letter of thanks with the invitation to complete the survey for those who have not done it yet.

The aim of the final *verifying* contact with the respondent is to clarify any doubts which may arise during the survey, as well as to express gratitude for the participation in the survey. The participants interested in the subject matter may be served with preliminary survey results. It is worth stressing that an avalanche of reminders sent may be tiresome and, therefore, should be avoided.

If published on the Internet, the survey can be presented in at least two ways. It can be displayed on the website either in whole (see: Fig. 3) or in part (see: Fig. 4). The later option was utilised in the Survey Management System, eBadania.pl, where each question popped up on a separate screen.

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[28] S. Crawford, M. Couper, M. Lamias, *Web Surveys: Perception of Burden.* Social Science Computer Review, 2001 and J. Sills, Ch. Song, *Innovations in survey research: An application of web-based surveys. Social Science Computer Review,* 2002 – podaję za: J. Zając, D. Batorski, ibid.

[29] T. Mangione, ibid., p. 88.

Wiek:

- ◉ 18-24
- ○ 25-30
- ○ 31-40
- ○ 41-50
- ○ 51 i więcej

Płeć:

- ◉ Kobieta
- ○ Mężczyzna

Wykształcenie:

- ○ podstawowe i niepełne podstawowe
- ○ zasadnicze zawodowe
- ◉ średnie ogólnokształcące
- ○ pomaturalne
- ○ wyższe zawodowe
- ○ wyższe magisterskie

Fig. 3. The survey displayed on the website in whole

The second option can be modified in various ways. For instance, the survey can be constructed of individual question blocks, displayed on the screen, e.g. starting with demographic questions. The questions can also be displayed separately on subsequent sub-websites (one screen for one question). In the first option, where the survey is published in whole, the respondent can skim and scan all questions at once, becoming familiar with their quantity and complexity. In contrast, if each question is published on separate sub-websites, the respondent cannot see the whole survey but he/she can be informed on the number of questions through the access bar.

Alternatively, the number of questions, and the estimated time for the survey completion, can be indicated yet in the invitation to the survey. This option of displaying the survey facilitates the application of the transition rules, or introduction of question blocks for specific respondent categories (branching, e.g. after providing a specific response, the respondent is asked to complete the category of individually matched questions). Finally, some of the surveys wholly displayed on websites exclude the application of transition rules, while others introduce drop-down lists which constitute another example of transition rules.

PRZEMOC W SZKOLE.

3. Czy doświadczyłeś przemocy w Twojej szkole ponadgimnazjalnej?

Zaznacz odpowiedź. Możesz wybrać więcej niż jedną odpowiedź i/lub dopisać brakującą możliwość.

    tak, ze strony innych uczniów
▦ tak, ze strony nauczycieli
    tak, doświadczyłem i sam stosowałem przemoc wobec innych
▦ nie, ale tyczy się to moich znajomych
    nie doświadczyłem/-am przemocy, ale sam/-a stosowałem/-am przemoc wobec innych
▦ nie, nie spotkałem się z tym zjawiskiem
    inne (jakie?)

<<   3/19   >>

Fig. 4. The survey with separate screens for each question

Careful preparation of the invitation to the survey is extremely important, especially in such surveys where each question is displayed on a separate screen. Given that the respondent cannot glance through the whole questionnaire at once, the incentive appearing on the invitation screen should be cleverly designed to actually encourage potential respondents to participate in the survey.

According to Sztabiński, rewards are highly efficient tools for inducing the respondent to participate in the survey. These can include verbal recognition for the participant treated as an expert whose opinion on a certain problem is of special value. Apart from that, some other rewards, preferably not financial, can also be offered. Moreover, the respondent will be more willing to participate in the survey if we reduce the participation costs, by assuring him/her that the survey is not time-consuming, and effort-free, which may entail elimination of difficult or touchy questions. Finally, the survey will appear more reliable, and thus more eagerly completed, if we refer to some institution enjoying public trust and respect[30].

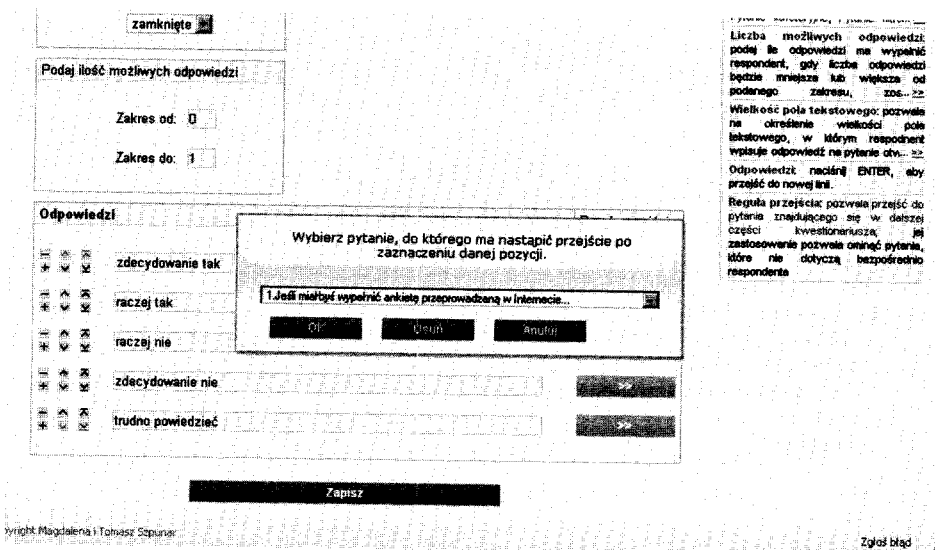[30] F. Sztabiński, ibid., pp. 140-141.

Fig. 5. Introduction of transition rules in the eBadania.pl system

An invitation to the survey (an invitation letter) should specify the estimated time required to fill in the survey. Serving the respondents with misleading information will not pay off. The moment it is discovered, they are likely to entirely abandon the survey. An average time for completing the survey can be determined in the pilot stage, by asking a few people to complete the survey, and then calculating the average. Apart from specifying the average time required to fill in the survey, the invitation should also define the time limits of the survey. Respondents should be explicitly instructed on the deadline for completing the survey, as not every person fills in the questionnaire immediately. However, if the data collection period is too long, there may be the risk that the survey completion will be endlessly postponed until the respondent forgets about it altogether. The research on mail surveys seems to confirm that the questionnaires are returned in a more timely manner if the survey deadline is specified. Aiming at observing the deadline, the surveyed can opt for filling in the questionnaire immediately, in order not to forget about it later on[31]. Extension of the survey in time hardly ever results in a higher percentage of returns, and very often proves to have a demobilising effect on the prospective respondents. It appears that the time limit for the survey to be returned should not exceed one month. What is more, we should avoid sending invitations (invitation letters) during holidays of any kind, or in a travelling period (such as long weekends), since it can have a negative im-

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[31] T. Mangione, ibid., pp. 110.

pact on the number of returns. Not using the Internet for some time, the respondent is then likely to forget about the invitation to participate in the survey[32], or neglect it altogether, given the avalanche of other more urgent e-mails to be answered. The studies conducted indicated that students were generally less eager to participate in surveys during exam sessions, holidays, or summer break[33]. Although these studies referred only to students, it seems that the results obtained reflect all Internet users. The figure below shows the distribution of visits on the eBadania.pl website by hour, which illustrates the specificity related to the Internet use. The peak is recorded between 8 a.m. and 1 p.m. Then, between 2 p.m. and 4 p.m., the number of visits drops, to grow again after 5 p.m. and until midnight.
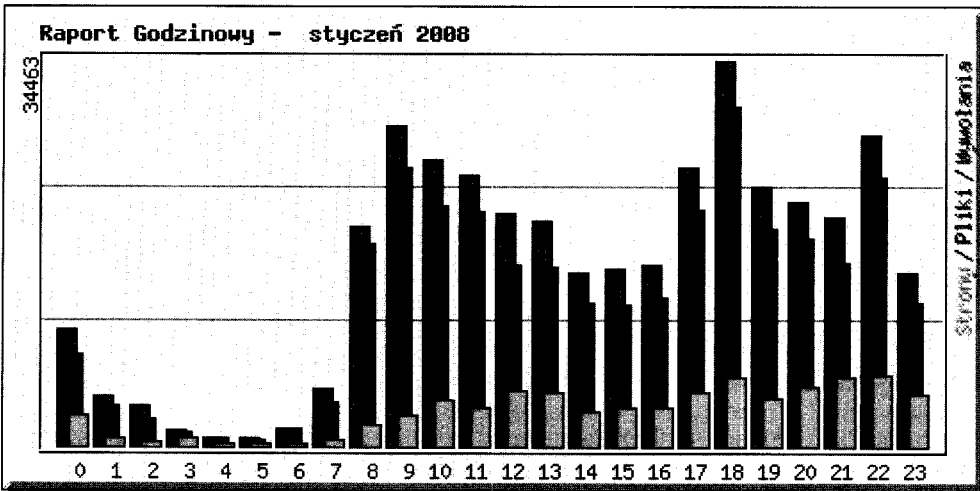

Fig. 6. The report by hour for the eBadania.pl website [data for January 2008].
Source: http://www.stat.pl

The Research Management System, eBadania, allows for adding, removing and shuffling the order of questions, and introducing transition rules, through which "filtering" of the respondents who should not answer a certain question, or declared to be unfamiliar with a certain subject matter, is made possible. The wide array of options connected with results exporting to the programmes for the statistical data analysis (such as SPSS, Statistica), as well as to the most common calculation and analysis programme, MS Excel. This

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[32] This refers to an invitation sent by e-mail.
[33] S. Crawford, M. Couper, M. Lamias, *Web Surveys: Perception of Burden.* Social Science Computer Review, 2001 and J. Sills, Ch. Song, *Innovations in survey research: An application of web-based surveys.* Social Science Computer Review, 2002 – quoted after J. Zając, D. Batorski, ibid.

reduces the painstaking data imputation process which often entails certain errors related to the human factor. It is worth noting that other tools used for the survey research conduction via the Internet offer mainly the concise data compilation, with no option of any further statistical analysis.

Nr	Pytanie	Instrukcj	Typ pytan	Ilość	Opis	Kod	Odpowiedzi	Typ	Braki
1	Jeśli miał(a)byś wypełnić ankietę p	w każdej	skala	1 ->	zdecydowanie tak / raczej tak / raczej nie / zdecydowanie nie / trudno powiedzieć				
					stosowanie stylu formalnego np. Szanowna/	v1_1	1: zdecydowanie tak / 2: raczej ta	N	99
					stosowanie stylu nieformalnego np. Drogi uż	v1_2	1: zdecydowanie tak / 2: raczej ta	N	99
					instytucjonalny adres mailowy z którego jest	v1_3	1: zdecydowanie tak / 2: raczej ta	N	99
					prywatny adres mailowy z którego jest wysy	v1_4	1: zdecydowanie tak / 2: raczej ta	N	99
					stopka informująca o szczegółach badania	v1_5	1: zdecydowanie tak / 2: raczej ta	N	99
					umieszczenie zdjęcia badacza	v1_6	1: zdecydowanie tak / 2: raczej ta	N	99
					wyraźna adnotacja, ile ankieta zajmie czasu	v1_7	1: zdecydowanie tak / 2: raczej ta	N	99
					zapewnienie o anonimowym charakterze bad	v1_8	1: zdecydowanie tak / 2: raczej ta	N	99
					informacja o tym, że jesteś osobą wyjątkową	v1_9	1: zdecydowanie tak / 2: raczej ta	N	99
					informacja o tym, że inni wypełnili już ankiet	v1_10	1: zdecydowanie tak / 2: raczej ta	N	99
					wskaźnik postępu w wypełnieniu ankiety	v1_11	1: zdecydowanie tak / 2: raczej ta	N	99
2	Które czynniki uważasz za najbard	proszę w	ranga	1:w ogóle nie ważne -> 5:bardzo ważne					
					gratyfikacja pieniężna	v2_1	1:w ogóle nie ważne -> 5:bardzo v	N	99
					możliwość wglądu w wyniki badania	v2_2	1:w ogóle nie ważne -> 5:bardzo v	N	99
					zainteresowanie tematyką badania	v2_3	1:w ogóle nie ważne -> 5:bardzo v	N	99
					nagrody dla wybranych w drodze losowania	v2_4	1:w ogóle nie ważne -> 5:bardzo v	N	99
					długość ankiety	v2_5	1:w ogóle nie ważne -> 5:bardzo v	N	99
					intuicyjna obsługa	v2_6	1:w ogóle nie ważne -> 5:bardzo v	N	99
3	Płeć	wybierz je	zamknięte	1 -> 1		v3	1: kobieta / 2: mężczyzna	N	99
4	Wykształcenie	wybierz je	zamknięte	1 -> 1		v4	1: podstawowe / 2: zasadnicze za	N	99
5	Miejsce zamieszkania	wybierz je	zamknięte	1 -> 1		v5	1: wieś / 2: miasto do 20 tys. mie	N	99
6	Stanowisko pracy	wybierz o	półotwarte	1 -> 3					
						v6_1	"uczeń, student"	N	99
						v6_2	"prywatny przedsiębiorca"	N	99
						v6_3	"pracownik sektora prywatnego"	N	99
						v6_4	"pracownik sektora publicznego"	N	99
						v6_5	"bezrobotny"	N	99
						v6_6	"mnik"	N	99

Fig. 7. An example of the data imported from the eBadania Research Management System in a *.xls. file

The Internet becomes a powerful medium in the process of conducting research. Its unique features guarantee that the surveys, both quality and quantity-oriented, are cost effective, efficient, and very often more adequate in terms of methodology. A wide range of tools for conducting research surveys on-line, including the Research Management System eBadania.pl presented here, allow for the on-line surveys to be designed and executed by virtually anyone whose computer and Internet literacy is on an intermediate level. Programming skills are not indispensable. These wide possibilities are certainly worth exploring, being at the same time mindful of the dangers related to conducting the research via the Internet.

References

1. Wimmer R., Dominick J., *Mass media. Metody badań*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków, 2008.
2. Zając J., *Nieważne jak pytasz: cechy zaproszenia a skłonność do udziału w ankiecie internetowej*, [in:] M. Sokołowski (editor) Oblicza Internetu. Internet w przestrzeni komunikacyjnej XXI wieku, PWSZ, Elbląg, 2006.
3. R. Mącik, *Wykorzystanie Internetu w badaniach marketingowych*, Lublin, MCSU, 2005. K. Sobieszek, *Problem błędu braku odpowiedzi w badaniach Internetowych – rozważania teoretyczne*, [in:] Ł. Jonak, P. Mazurek, M. Olcoń et al. (editors), Re: *Internet – społeczne aspekty medium. Polskie konteksty i interpretacje*, WAiP, Warszawa, 2006.
4. Daniłowicz P., Sztabiński F., *Nowe spojrzenie na ankietę pocztową. Jak uzyskano 70% zwrotów*, in: Z. Gostkowski (Ed.) Analizy i próby technik badawczych w socjologii, IFIS. PAN, Warszawa, 1992, tom IX.
5. Sztabiński F., *Ankieta pocztowa i wywiad kwestionariuszowy*, Warszawa, IFiS PAN, 1997.
6. Mangione T., *Ankietowanie pocztowe w badaniach marketingowych i socjologicznych*, PWN, Warszawa, 1999.

Internet resources

1. Smith C., *Casting the Net: Surveying an Internet Population*, 1997, http://jcmc.indiana.edu/vol3/issue1/smith.html
2. Zając J., Batorski D., *Jak skłonić do udziału w badaniach internetowych: Zwiększanie realizacji próby*, http://sna.pl/dbatorski/BadaniaPrzezInternet.html