

THEMATA 3

# **E-learning Archaeology,**Theory and Practice

Heleen van Londen Marjolijn S.M. Kok Arkadiuz Marciniak (eds.)

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# 05

## Knowledge is just a 'click' away! Katarzyna

Marciniak & Agnieszka Chwieduk

Evaluation of e-learning course 'Archaeological heritage in contemporary Europe' among Polish participants

#### Introduction

The idea, to replace a real teacher with a machine or with artificial intelligence is slowly losing its own futuristic dimension. Radio, television, robots are the most well-known examples of this technical Odyssey. Today, also the Internet has joined this idea. The banal experience of many people, which is the everyday use of this mass-media means to help to make it the tool of education. Naturally, this happens on various levels, also on an academic one. In this context, this is a good idea to raise a question for its real practical use. Thus, though in part to understand what 'e-learning' means, it is proper to ask groups who create this kind of learning tool and the rules regarding the operation of this method, perhaps accurately described as not the 'traditional method'?' Last but not least, what can we learn using this method and what are the possible results?

We will look at these questions in a very narrow range, because it is impossible that one text will contain a complete answer to them. An object of our interest is the international project called: *E-learning as a tool of knowledge transfer in the field of protection and management of archaeological heritage*,<sup>3</sup> addressed to archaeologists from England, Latvia, the Netherlands, Sweden, Poland and Germany. The program is addressed to two target groups. One of them is related to the archaeological heritage protection sector ("AH") and to practicing archaeologists, planners, architects working often far away from large municipal centers, often having no contact with each other. The authors

of this undertaking surmounted against the necessity of the continuous improvement of professional skills of these people which because of place of residence have difficult access to latest trends in the discipline, first of all from the range of 'AH' protection – an essential matter in their professional careers. Furthermore, preparing an e-learning course, they not only just acknowledge and popularize their own disciplines, in other words archaeology and information technology, but will seek solutions for a better their application in didactics, especially at an academic level. This is why the second target group e.g. students of graduate studies, PhD and extramural studies, for whom the archaic program of studies did not assure the suitable theoretical base connected with the new and dynamically developed sector of 'AH' protection, wherein graduates can find employment.

During the projects development essential are both the originators of the project (and also performers) and participants which should be treated as co-authors (which will be further described). The authors have postulated that selected aspects of archaeology can be teach, without personal contact neither with trainees, nor with the so called 'field location'. Inviting computer scientists, authors elaborated five themes with varied quantities of modules. The teaching procedure relies on the participation in synchronous remote lectures, asynchronous seminars and a group and individual exercises. The work was activated by additional 'didactic elements': web links supplemented the range of the main subjects, and first of all the duty of participation in forums (minimum two opinions) and writing mutual essays (work in pairs and in groups). The same schema was introduced in all co-operatives in these project countries. In the conviction of the project originators, this international dimension, from the foundation serving to a multi-level exchange of participants experiences, demands the use and simultaneously tests the method of remote teaching. This innovative use within archaeology, and also up-to-datedness of the delivered essential contents, produces the question for the reception of the whole task among participants. In this manner participants become a side forming the project and the integral part to subjecting the projects evaluation.

#### The course evaluation – content

The evaluation takes place in two stages. First, includes the analysis of questionnaires within each partner-country. The second will refer to resumptions of the whole. Besides, an understanding of 'e-learning' participant's

Groups	Female	M	Male	Total		
	N	%	N	%	N	%
Graduate students	9	17.31	3	5-77	12	23.08
PhD students	1	1.92	3	5.77	4	7.69
Graduates	3	5.77	3	5-77	6	11.54
Conservators	13	25	8	15.38	21	40.38
Others	3	5-77	6	11.54	9	17.31
Total	29	55-77	23	44-23	52	100

Groups of profession	Initial number of participants N	Number of resigning participants N	Perc. of resigning participants %
Graduate students	12	3	25
PhD students	4	0	0
Graduates	6	1	16.66
Conservators	21	7	33-33
Others	9	3	33-33
Total	52	14	26.92

motives, a main aim of evaluation is an indicator on matters which can possibly help to improve this teaching method. Having this in mind, in this text we will focus exclusively on the results of received questionnaires from Polish participants of the course. First, we will introduce an analysis of the evaluation results of the method of the e-learning method, conducted using questionnaires. The use of a standardized questionnaire allows obtaining the general overview of the course, including a range of opinions and ideas regarding this teaching method. Besides that we will pay attention on rating participants concerning the manner of the courses' realization, then we will point out also potential reasons for their behavior. Consequently, we propose

Table 1 Gender of participants from different groups of professions
Table 2 Resigning participants in respective groups of profession

the interpretations of received results, remembering about its hypothetical character. At the present stage, it is too premature even if the partial confirmation, existing popular supposals that e-learning courses are 'a revolution in academic education', 'its true future', whether the challenge or even the threat' for the currently carried out manner of teaching.

In Poland, 52 participation in the course which lasted 7 months was declared by 52 persons (Table 1).

A higher number of female (55,77%) than male (44.23%) took part in the course in Poland. As regards their profession, the highest number was represented by conservators (21 persons which constitutes 40.38%) followed by graduates students (12 persons – 23.07%) and graduates (6 persons – 11.54%).

The course was completed by 38 participants: conservators (the largest group with also a great number of resignations), graduate students, PhD students and graduates of archaeology.

Altogether, a total number of 38 persons completed the course, namely 73.08% of those who began it. Interestingly, the most work motivated group were PhD students, they finished the course in 100%. This is a very specific group. They are still not committed to professional work and often without family-commitments. However, conservators resigned in the greatest number. It is probably due to that many duties at work and at home. Remaining groups (Others) declared the boredom and the conviction that the course however would not be useful to them during their professional career.

Only 28 participants from the groups that completed the course answered the questionnaire. It was composed of 63 questions (open and closed), arranged according to blocks of essential content (what is learned?) and 'tools' of media (how is something learned?). The supplement was constituted by questions concerning three aspects of the course: technical (problems with the earlier conducted configuration and the navigation in the program); social and its relationship with the quality of teaching (lasting of made acquaintances, international range of the initiative), and appeal of the all undertakings (measured with an international context, with usefulness of knowledge and with competitiveness with relation to traditional, stationary means of knowledge transmission).<sup>7</sup> For 96.4% learners, this e-learning course was the first of this type of experience.

Modules	% of indications
Theorizing cultural heritage	10.71
Mentalities and perspectives in archaeological heritage	
management	3-57
Concepts of understanding – spatial valorization of	
archaeological heritage resources	0
Aerial survey in archaeological protection and	
management system	50
Geographic Information System as a method of	
management of spatial data	39.28
Geophyscial prospection in archaeological protection and	
management system	17.86
Images of the past	7.14
Cultural biography of landscape	25
International conventions and legal frameworks	28.57
Sustainable development in the archaeological heritage sector	17.86
Management cycle & information systems in the	
archaeological heritage sector	3-57
Commercial archaeology	7.14
A single voice? Archaeological heritage. information boards	
and the public dialogue	3-57
Methods of engagement. publicity and media relationships	21.43
Public outreach – museums. schools. services	0

Essentially, respondents rated favorably the very idea of the course (75 %answers) along with its modules (100 % answers). The most interesting modules were recognized (Table 3): Aerial survey in archaeological protection and management system, Geographic Information System as a method of management of spatial data, and International conventions and legal frameworks. According to graduates and graduate students these subjects will be helpful in their future work. They permit also to increase their knowledge (especially within the range of non-invasive methods) which were not learned during regular studies.

Table 3 Percentage of indications of the best module

Modules	% of indications
Theorizing cultural heritage	14.28
Mentalities and perspectives in archaeological heritage	
management	14.28
Concepts of understanding – spatial valorization of	
archaeological heritage resources	7.14
Aerial survey in archaeological protection and	
management system	17.86
Geographic Information System as a method of	
management of spatial data	7.14
Geophyscial prospection in archaeological protection and	
management system	17.86
Images of the past	3-57
Cultural biography of landscape	7.14
International conventions and legal frameworks	7.14
Sustainable development in the archaeological heritage sector	17.86
Management cycle & information systems in the	
archaeological heritage sector	14.28
Commercial archaeology	14.28
A single voice? Archaeological heritage. information boards	
and the public dialogue	10.71
Methods of engagement. publicity and media relationships	10.71
Public outreach – museums. schools. services	7.14

The module Aerial survey in archaeological protection and management system appeared the most controversial, because for example for conservators it was 'of little interest' – the only one person from this group had a different opinion. Besides, the subjects of lectures extend interests, among other things through the interesting bibliography, including a look into many connected aspects regarding 'AH' protection, for example, through the  $\,$ recognition of modern technologies for documentation and reconnaissance. Particularly significant appeared the module concerning international legislation. Respondents recognized that Polish conventions contain numerous

Table 4 Percentage of indications of the worst module

gaps, making the work on 'AH' protection difficult and they declared the necessity to change in this regard. Opinions of students had a brief, but simultaneously most enthusiastic implication. This group finds that lectures show the development of the discipline and supplement in large measure the knowledge acquired during regular studies.

The modules which pleased the least (see Table 4) were Geophysical prospection in archaeological protection and management system, Aerial survey in archaeological protection and management system, Sustainable development in the archaeological heritage sector and also Theorizing cultural heritage, Mentalities and perspectives in archaeological heritage management and Commercial archaeology.

It is worth stressing in this place two matters. First, these estimations are more 'dispersed', which means that differences in indications on each module were very small: from one to two. Secondly, the critique had an ambivalent character, for example the language of lectures seemed to be too simple, even banal, but at a same time communicable and without the need from users of the platform to work with a dictionary. One ought to add that the variety of modules obtained a simultaneously similar score of the 17.86% positive and negative answers (for example Geophysical prospection in archaeological protection and management system). Furthermore, in the conservator's opinion courses were good, however, some of them brought in nothing new, or, as giving inspiration, raised the need for information. Sometimes they had theoretical (little practical) character and 'were wrote forcibly'. Both, this group, as well as graduates and graduate students claimed that because lectures constituted a logical block, it is very difficult to indicate the most unsuccessful of them. This polarization of opinion means that it is difficult to design a course which pleased in similar measure to all receivers, differing first of all with professional experience and so called practical experience. This thread will become fully described in the final part of the article with reference to the 'social-psychological portrait' of participants.

The essential evaluation criterion within the meritorious range, and simultaneously showing the whole of the courses structure, referred to necessary labor input to the assimilation of the content of lectures. A dominant opinion that most labor-consuming modules (see Table 5): Geographic Information System as a method of management of spatial data, International conventions and legal frameworks, Geophysical prospection in archaeological

Modules	% of indications
Theorizing cultural heritage	10.71
Mentalities and perspectives in archaeological heritage	
management	10.71
Concepts of understanding – spatial valorization of	
archaeological heritage resources	10.71
Aerial survey in archaeological protection and	
management system	10.71
Geographic Information System as a method of	
management of spatial data	46.43
Geophyscial prospection in archaeological protection and	
management system	32.14
Images of the past	10.71
Cultural biography of landscape	25
International conventions and legal frameworks	15.71
Sustainable development in the archaeological heritage sector	3-57
Management cycle & information systems in the	
archaeological heritage sector	10.71
Commercial archaeology	3-57
A single voice? Archaeological heritage. information boards	
and the public dialogue	3-57
Methods of engagement. publicity and media relationships	14.28
Public outreach – museums. schools. services	25

protection and management system and Methods of engagement, publicity and media relationships proved simultaneously the most important in the trainees work, which explained their own engagement.

Besides graduates prevailing opinion was that particular modules involved a similar effort. Instead, conservators stated that lectures Theorizing cultural heritage, Concepts of understanding – spatial valorization of archaeological heritage resources, Public outreach – museums, schools, services delivered theoretical bases and that is why it is proper to get the feel of this subject

Table 5 Percentage of the most labor-consuming module

#### Modules % of indications Theorizing cultural heritage 46.43 Mentalities and perspectives in archaeological heritage management 21.43 Concepts of understanding – spatial valorization of archaeological heritage resources 21.43 Aerial survey in archaeological protection and management system 35.71 Geographic Information System as a method of management of spatial data 7.14 Geophyscial prospection in archaeological protection and management system 14.28 Images of the past 14.28 Cultural biography of landscape 3.57 International conventions and legal frameworks 14.28 Sustainable development in the archaeological heritage sector 3.57 Management cycle & information systems in the archaeological heritage sector Commercial archaeology 32.14 A single voice? Archaeological heritage. information boards and the public dialogue 17.86 Methods of engagement. publicity and media relationships 17.86 Public outreach – museums. schools. services 14.28

matter. However, this does not result that one sacrificed to them most of the work. Single opinions (33, 33%) in this group acknowledged the module International conventions and legal frameworks as useful, but without the need of great engagement, except for the penetrating reading of its content. In students opinion (80% of indications) this module demanded most effort. The least labor-consuming, especially among graduates, are modules Theorizing cultural heritage (92.86 % of indications), and Commercial archaeology (also in the conservators opinions), while the module Aerial survey in archaeological protection and management system obtained mostly 'diffuse' indications.

Table 6 Percentage of the least labor-consuming module

#### The course evaluation - methodology

The commitment of the course participants into the work over the content of lectures has a connection with the manner of knowledge transfer. At the construction of the survey, special attention was paid to the matter of the structure of each module, their mutual arrangement, the communicability (Were the contents and the language understandable for the participants?), and also the relation between the length of the duration of each module parts (the limited exposure time on the platform) and the understanding of the given material. In the conviction of the vast majority of participants the modules were introduced in the suitable order (96.43% of indications) and constructed in a logical manner (92.87% of indications). One perceived also satisfying level of the modules content and the good communicability of the proposed subjects (in both cases 96.43% of indications), and also the sufficient time of their duration (75% of indications). Furthermore, most of the participants (92.87% of indications) declared that e-learning media were well-chosen to the proposed subject matter, which simultaneously confirms the opinion about the well constructed structure of the course.

The authors of the survey assumed that the above mentioned features had an influence on the learning effectiveness, similarly as used methods ('didactic tools'), e.g.: the literature, syllabus, discussions on the forums and the writing of essays. The proposed bibliography was rated as 'useful' (60.71% of indications, including 64.28% of indications in the group of graduates), then as 'professional' (50% of indications), adequate to expectations and contents (35.71% of indications). In addition, more than half of the participants (69.86% of indications) used a syllabus, almost one-third (28.57% of indications) used it sporadically, and the vast majority (75% of indications) accepted the contents as useful. It is significant that these 'helps' did not have critical opinions.

The participation in discussion forums was translated into quantity of time devoted to them (there were problems with exact time estimation), their inspiring part in the interest with proposed subject matter and the influence on the quality of the education and on linking longer communications between people. The most committed to this were young graduates – daily they dedicated to this matter about one hour. As some say, they used forums unsystematically:  $^{\prime}$ 20 – 30 minutes daily, or when work was accumulated'. However, they very precisely estimated the time needed to study the modules in c. one hour. The duty of the participation in this didactic option was

softened by the possibility of the choice of the time of the day. Most of the participants had to combine their professional work with participation in the course. In this case, the most frequent time 'of meetings on forums' were evening-hours. The exchange of ideas and opinions did not have an influence on the persistence of contacts among participants. They showed a very pragmatic approach, ascertaining that acquaintances ended with the end of the course. They appreciated the inspiring function of this method of teaching (82.14% of indications) and the considerable influence on the elevation of the quality of the e-learning education (85.71% of indications).

The following supporting method was connected to the necessity of the writing of essays 'in pairs'. Graduates were in this regard enthusiasts (57.14% of indications), because they recognized this experience as inspiring, while conservators — as individualists (88.89% of indications) showed large skepticism (dictated with presumably definite, 'former' learning habits). Generally, in the group 'individualists' predominated (71.43 % of indications), including, what is interesting, eight graduates (57.14% of indications). This group, as was shown earlier, treated work in pairs as a challenge; however, they prefer to work individually. The common work on essays demanded also a definite input of time — in accordance to requirements one should have to sacrifice slightly 6 hours on one course — which proceeded very much differently. The most precise in time estimation were students spending about two hours every week. Others dedicated to this task from one hour to four days. The unique exception is the period of two weeks.

The general rating regarding the effectiveness of the courses conducting methods indicates the slight superiority of the study of modules (53.57% of indications), in relation to the additional 'didactic tools' (43.86% of indications). The results concerning the time seem to support this statement. Participants most precisely estimated a duration of the work in particular modules (most of all indications regarded the option 'about one hour'). Simultaneously, opinions that the participation in the course had been characterized with irregularity have appeared: one time from 20 to 30 minutes, another time even 5 hours, or participants did not at all work systematically. This permits the supposition that irrespective of the effectiveness of a particular didactic method, exists other, unrelated with the course, factors that have an influence on it.

The success of teaching through the Internet determines the technical base, e.g. the efficiency of the information transfer, conditioned among other

things with familiarity with the program among participants, as well as with the quality of equipment used by them. Research did not embrace this variable because of the difficulty in reaching reliable information exclusively by asked questions. Instead, it succeeded to rate the technical side of the course understood as: (1) problems with hardware and programs configuration. The vast majority of learners avoided any problems with hardware (92.88% of indications) as well as with the platform (75% of indications). The technical support to the course was found satisfying (82.14% of indications). Besides, the technical side of the courses functioning was tied up with the proper operating of particular modules: the navigation in modules was rated as favorably (85.71% of indications). Furthermore, interactive elements were rated as positive. They were ready to use in the right place and time (96.43% of indications). The best module technically was recognized respectively Aerial survey in archaeological protection and management system (64.28% of indications), Geographic Information System as a method of management of spatial data (32.14% of indications) and Images of the past (17.86% of indications). The remaining parts of the course obtained approximate results. The most favorable ratings were formulated by graduates, while conservators evidenced 'good preparation' instead students 'had not provisions'. Respondents did not indicate the worst technical module, which allows to give the high rate to the technical aspect of the program (in the filtering question 89.28% of indications confirms this mark).

#### The course evaluation – prospects for the future

The social aspect of the course is characterized, as shown above, by the emergence of not only 'internet-circle of friends', but rather interest groups linked by particular knowledge, making them a circle of specialists. We can also include teachers who according to participants (92.88% of positive indications) took care of good communication with them. The quality was raised by the international character of the project which accordingly to the opinion of most participants (96.43 % of indications), affected well the level of the education. Participants argued that the knowledge delivered during the course allows the understanding of current problems connected with the 'AH' protection in the country and in Europe (75% of indications), and also that this knowledge will be useful in the future during their professional work (89.28% of indications). Such opinions were presented especially by conservators. The least determined in this regard were graduates.

To the discussed aspect of the course is connected the following aspect, 'the appeal'. The courses appeal is constituted by many elements. The international character of the project influenced almost half of the participants on the decision about the choice of the course (42,85% of indications) – this factor was especially important for women (57.89% of indications). It lasted a sufficient time (75% of indications), which in the opinion of most (75% of indications) made it possible to get to know all of the proposed content of the modules. The content of the modules was granted by the vast majority of trainees as useful (92.88% of indications) and of practical character (96.43% of indications).

The next aspect, also very important for the future of e-learning in our country, is the competitiveness of e-learning and its effectiveness with relation to the traditional transfer of knowledge. Participants pointed out the advantage of e-learning (67.86% of indications) over the traditional method (the lack of indications), however this is important to take into account the large number of indications (32.14%) with an undecided opinion: 'it is difficult to say, it depends on the subject of the module'. The groups most satisfied with e-learning solutions were conservators and graduates. However, as regards the effectiveness of e-learning results show hesitation amongst respondents – 71.42% of indications. The picture complements one more point, namely the perspectives of teaching archaeology via the internet. In this matter results show a positive prognoses - 96.42% of indications on the 'very well' and 'well' option, at the lack of indications on the option 'I do not see the possibility of using e-learning' and only 3.57 % of indications 'difficult to say'. Comparing with the competitiveness, the effectiveness and perspectives, the last result suggests that participants favorably perceive e-learning, but they did not break with the traditional methods of studying. For this kind of opinion speaks also the ambivalence of the attitude towards the idea of the meeting lecturers with participants after the end of the course: 46.42% of indications on the option 'yes' and 'rather yes', 32.14% of indications on the option 'not' and 'rather not', at 21.43% of indications on the option 'this is difficult to sav'.

The remaining part of the course evaluation comprises a discussion on its virtues and failures as well as postulates to supplement the content of learning. In the first case, the participants appreciated the flexibility of this method regarding the time and the place of learning. According to them learning through the Internet permits to combine numerous professional

and everyday duties with additional training, which was accordingly claimed by all three groups of participants. Graduates noticed the possibility of saving time and money', appreciated the possibility of learning at home, the chance to improve their qualifications, which is an offer, which they can not find in their own city. Students were convinced by the international dimension of the project making possible an access to different opinions about 'AH' protection. At the same time, the course failures refer to the need of extending and consolidating knowledge. According to the participants the modules became too quickly blocked, and the printing of drafts and delivered contents of lectures was impossible. In every module it would be very useful if there was an electronic version of the bibliography and a greater number of publications in Polish (according to conservators). Participants pointed out also to the lack of personal contact with lecturers to whom they could not give questions during the course. In addition, conservators pointed out certain inconveniences in the necessity of self-discipline and the writing of essays with strangers in a group (alike students), while graduates pointed out the difficulty of motivation. One ought to underline that a small number of participants shared their own opinions on this issue and left this question open.

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It is worth pointing out that some participants expected more detailed presentation of some issues. This referred in particular to a need of greater depth of knowledge regarding legal solutions in Poland within the range of 'AH' protection. It would also be of use to put more information connected with problems concerning 'AH' protection in other European countries (taking into consideration the sociopolitical and cultural situation). In addition, participants postulated the introduction of practical courses with specialists, and also certain changes in the course program: increase the number of modules concerning theory (57.14% of indications), the number of exercises (53,57% of indications), also in modules (60,71% of indications) and remote work (50% of indications). Participants rather do not see the need to increase the workload: individual work with modules (a slight difference between indications on 'yes' 42.85%, on 'rather yes' and 39.29% on 'no') and on forums (64.28% of indications). They want the course to contribute to the popularization of archaeology, including a complex nature of 'AH' protection.

#### Final remarks

The analysis presented above delivers fragmentary (with relation to all partner-countries) data regarding the opinions of Polish participants in the course 'Archaeology in contemporary Europe'. They clearly indicate that e-learning is an interesting and useful method of teaching and the course, which though has weaknesses, was conducted with success. This opinion is testified by the positive mark regarding not only the course contents, but also its technical side. Simultaneously, as indicated by the survey results, the course did not satisfy all participants to a similar degree. We can suppose that this is due to belonging to social-cultural 'different worlds' affecting the reception of training contents. Unfortunately, the proposed evaluation does not allow for the examination of these factors and sketching a fuller portrait of e-learning students. This is caused by a number of factors. Firstly, a comparatively long questionnaire, which – for the participants comfort – did not contain the pool of questions regarding social and cultural aspects of respondents lives. Secondly, circumstances conditioned the education should be observed in the everyday practice of the given group, and then confronted with obtained declarations. Unfortunately, this kind of research was not possible. Nonetheless, it is proper to put here an important question, how does the cultural environment of the course participants, bears on the perception and the use of e-learning?

Information obtained from the survey allows to make only a very general 'psychological and social' portrait of the participants. They were characterized, on the one hand by the curiosity of the proposed subjects that the efficient realization challenged the wish of learning the key matters regarding 'AH' protection. The most pragmatic and inquiring in this regard was the attitude presented by the conservators. More experienced, with relation to students, in the professional experience, they better assimilated the contents connected to legislation and rated more critically particular modules. Simultaneously, they showed skepticism as regards methodical innovations, including the participation in forums and a group work. The graduates are similar to them. Interestingly, completely different are graduate students presenting the usually enthusiastic attitude with relation to the whole course. All groups seem to be bounded with the traditional manner of learning, and consequently this habit in the knowledge acquisition does not make easy an implementation of e-learning solutions. Furthermore, participants are characterized by openness on international relations and awareness that professional practice involves vocational training. The best aspect of this training method is its flexibility. Each participant can regulate the learning time, is able to develop familiarity with the computer, and also can socialize himself/herself

through the necessity of cooperation with other participants. Simultaneously, methods of teamwork were not enthusiastically evaluated by the course participants.

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The analysis of the questionnaires allowed assessing the cognitive potential of the course. The correction of some solutions from the proposed didactic tools range can improve course performance, especially if their authors aim at efficient teaching of participants. This should be possible by providing much longer access to the modules after the course completion.

E-learning courses can be seen as yet another kind of social and cultural contacts. Their investigation generates a number of methodological and methodical problems, especially for anthropologists. Accordingly, interpretation of the survey results in terms of their implications for understanding contemporary social relations that go beyond everyday contacts and face to face relations makes it a highly difficult task.

- 1 The authors of this article are anthropologists. In the context of anthropology, many issues introduced in the text need a wider discussion, similarly as some conceptions related with the subject. However, it is proper to inform that the mentioned in the title e-learning method (literally meaning 'learning through the Internet') and education are important aspects, that on one hand create socially established manners of communication about the world, and on the other hand are the tools of its completion.
- 2 In opposition to 'not traditional' would 'the physical interaction: they respond mutually on their own behavior extra-verbal (they work more strongly) and verbal, in other words they experience sensually and intellectually their own presence. In this situation 'the work of the senses' is more intensive, than in the case of visual contact, how this takes place for example during lectures delivered by means of cameras (in this case they were not used during the project), or during the discussion on forums (the practical method used during the course).
- 3 Internet address of the platform: www.e-archaeology.org
- 4 Data received in this way are showed in the tables. Due to the space constraints, we presented only some of them. They contain general information regarding participants and accomplished by them the essential estimation of each module (most and least successful in respect of methodology), and also according to quantity of interest the necessary work needed to the assimilation of the projects content.

- 5 Through the interpretation we understand the synthetic discussion of findings, seeking certain constant 'features' characteristics for the discussed case, and possibly 'non-typical'. We do not invoke to any theories or ideas, for example, modern behaviors of people, living in the western culture, who participate in the so called information society, 'post-modern' or 'after-modern'.
- 6 A branch of cultural anthropology known as infonomics (Czekaj, Cwiklicki 2009: 4) aims to study e-society, including e-culture. Studies on e-society in Poland has hardly begun. In this regard, it is worth mentioning an volume E-nauka, e-kultura, e-spoteczenstwo edited by B. Płonka-Syroka & M. Staszczak and published in 2008.
- 7 D. Silverman (2008: 55) argues that one has to carefully interpret statistically significant correlations between variables in the cause and effect terms. This is particularly in the case in this article due to a small number of data being studied.

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