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**EVALUATION OF THE SUITABILITY OF STUDY VISITS
TO EXTERNAL COMPANIES AS A STRATEGY FOR
FAMILIARISING STUDENTS WITH
A BUSINESS ENVIRONMENT**

**EWALUACJA PRZYDATNOŚCI WIZYT STUDYJNYCH
W PRZEDSIĘBIORSTWACH JAKO NARZĘDZIA
WPROWADZAJĄCEGO STUDENTÓW
W ŚRODOWISKO BIZNESOWE**

Abstract

This paper presents the results of the evaluation of several study visits. On that basis, it discusses the issue of the suitability of study visits in external companies for the wider process of familiarising students with the business and market environment.

Keywords: study visits, evaluation

Streszczenie

W tym artykule przedstawiono wyniki ewaluacji kilku wizyt studyjnych. Na podstawie otrzymanych wyników omówiono kwestię przydatności wizyt studyjnych w firmach zewnętrznych jako narzędzia wprowadzającego studentów w środowisko biznesowe.

Słowa kluczowe: wizyty studyjne, ewaluacja

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1. Introduction

In recent decades, Cracow University of Technology has tried to provide the *sine qua non* condition for the successful transition from the purely scientific institution of academia to the knowledge-based economy – the early immersion of students of technical faculties into the business and market environment where they may find their potential employer and place of future self-fulfilment. An important element of the education policy relating to the technical faculties at Cracow University of Technology and the various programs run by the university under the EU Human Capital Operational Program are study visits to various companies in Poland and abroad. Such visits are very short in most cases and therefore one may ask if they actually contribute to maintaining the desirable link between the university and business and if they have a real impact on students' choices and attitudes towards their future career.

This paper presents the results of the evaluation of several study visits to companies in Poland and abroad. On that basis, it discusses the issue of the suitability of study visits in external companies for the wider process of familiarising students with the business and market environment. The evaluation covered post-graduate students studying fluid drives and fluid control systems as well as entrepreneurs who organised the study visits to their high-tech companies.

According to the obtained results, both the students and the entrepreneurs appreciated the essential role of study visits in the acquisition of highly-educated employers in innovative business and in shaping students' future careers through obtaining valuable personal contacts. Therefore, the study visits were found to be invaluable in establishing and maintaining the bond between the university and private companies. Aside from this, it was widely claimed that study visits may greatly contribute to honing students' skills by means of consolidating their technical knowledge with practice. On the other hand, it was revealed that the study visits were very often too short and sometimes not guided by specialists but by appointed workers whose technical knowledge was inadequate.

2. Methodology and Techniques

During the research, a CAWI method was employed. Computer assisted web interviews (CAWI) are a quantitative data acquisition technique in which respondents fill in the questionnaire on a website. The website provides its users with the necessary assistance. Therefore, the data may be acquired remotely from respondents and without the mediation of an interviewer who is not burdened with the time-consuming process of data entry typical of the PAPI method. Additionally, the data is analysed swiftly [1, 2]. In our research, the respondents of CAWI were:

- students studying fluid drives and fluid control systems;
- entrepreneurs who took part in organising the study visits.

3. Target group

3.1. The research

The research took place in May 2015. It covered the students studying fluid drives and fluid control systems who took part in study visits in companies and the entrepreneurs – people in charge in those companies involved in the study visits. Post-graduate studies in fluid drives and fluid control systems were study courses co-funded by the EU under the project POKL ‘PIT Mobilne studia podyplomowe we współpracy z przemysłem’ (OPHC ‘PIT Mobile post-graduate studies in collaboration with the industry partners’).

3.1.1. Students studying fluid drives and fluid control systems

The group consisted of fifteen men and no women. The respondents were mainly at the age of 25–30 (53%). See Fig. 1.

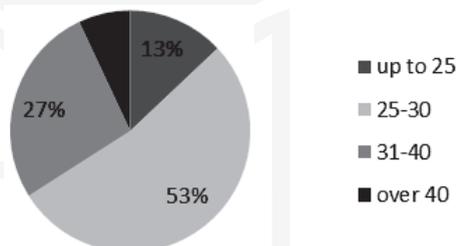
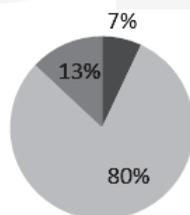


Fig. 1. Respondents' age. Source: Created by the authors, based on data from the CAWI interview with students studying fluid drives and fluid control systems, $N = 15$

Interviewed students studying fluid drives and fluid control systems were mostly (80%) employed within a branch of industry corresponding to the profile of postgraduate studies they had chosen (Fig. 2).



- Currently I am unemployed. I only study.
- I am employed in a branch of the industry corresponding to the post graduate courses I chose
- I am employed in a branch of the industry not corresponding to the post graduate courses I chose

Fig. 2. Employment profile. Source: Created by the authors, based on data from the CAWI interview with students studying fluid drives and fluid control systems, $N = 15$

3.1.2. Entrepreneurs who took part in organising study visits for FDC students

The group of entrepreneurs who took part in organising study visits consisted of two directors and vice-directors, two specialists and one head of department (Fig. 3).

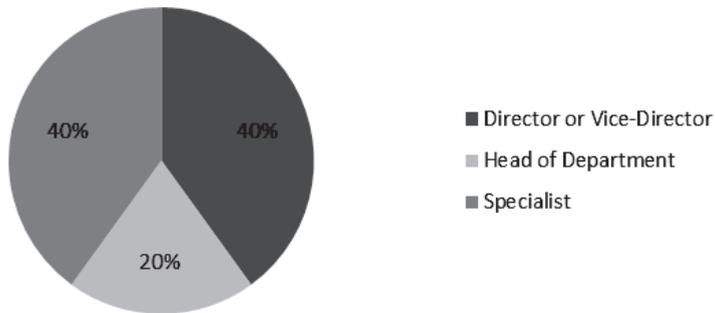


Fig. 3. Respondent's post. Source: Created by the authors, based on data from the CAWI interview with entrepreneurs, $N = 5$

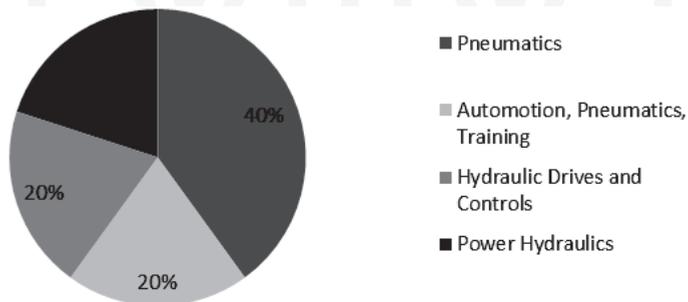


Fig. 4. Branches of industry represented by the respondents Source: Created by the authors, based on data from the CAWI interview with entrepreneurs, $N = 5$



Fig. 5. Size of enterprises. Source: Created by the authors, based on data from the CAWI interview with entrepreneurs, $N = 5$

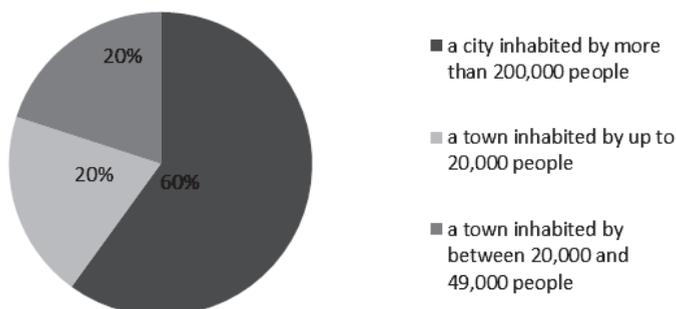


Fig. 6. Location of enterprises. Source: Created by the authors, based on data from the CAWI interview with entrepreneurs, $N = 5$

All the respondents represented enterprises involved in pneumatics or hydraulics (Fig. 4). Four of those enterprises employed 50-249 people and one of them employed more than 249 people (Fig. 5).

Three enterprises were located in a city inhabited by more than 200,000 people, one in a town inhabited by up to 20,000 people and one in a town inhabited by between 20,000 and 49,000 people (Fig. 6).

4. Results

4.1. Students studying fluid drives and fluid control systems

According to the research, students studying fluid drives and fluid control systems evaluated the possibility of taking part in study visits under the project as very high (87%) or high (13%). As many as 93% of them declared they had been glad of the study visits. Moreover, 93% of students claimed that the study visits had met their expectations. 93% of respondents claimed that during study visits in companies, they had been involved in activities raising their level of knowledge and skills and therefore, also raising their market competitiveness. All of the respondents declared that study visits were in professionally organised and well-chosen companies i.e. in those whose profile was consistent with the visitors' field of study, see Fig. 7.

Among the strong points of study visits, the respondents mentioned:

- the possibility of getting acquainted with the practical issues encountered by companies all over the world and with the existing solutions;
- the possibility of gaining experience;
- the possibility of getting business contacts;
- the valuable insight into the real work of an industrial facility involved in hydraulics or pneumatics;
- meeting with specialists;
- the possibility of honing practical skills in production engineering and management;
- the possibility of gaining knowledge concerning the services available on the market.

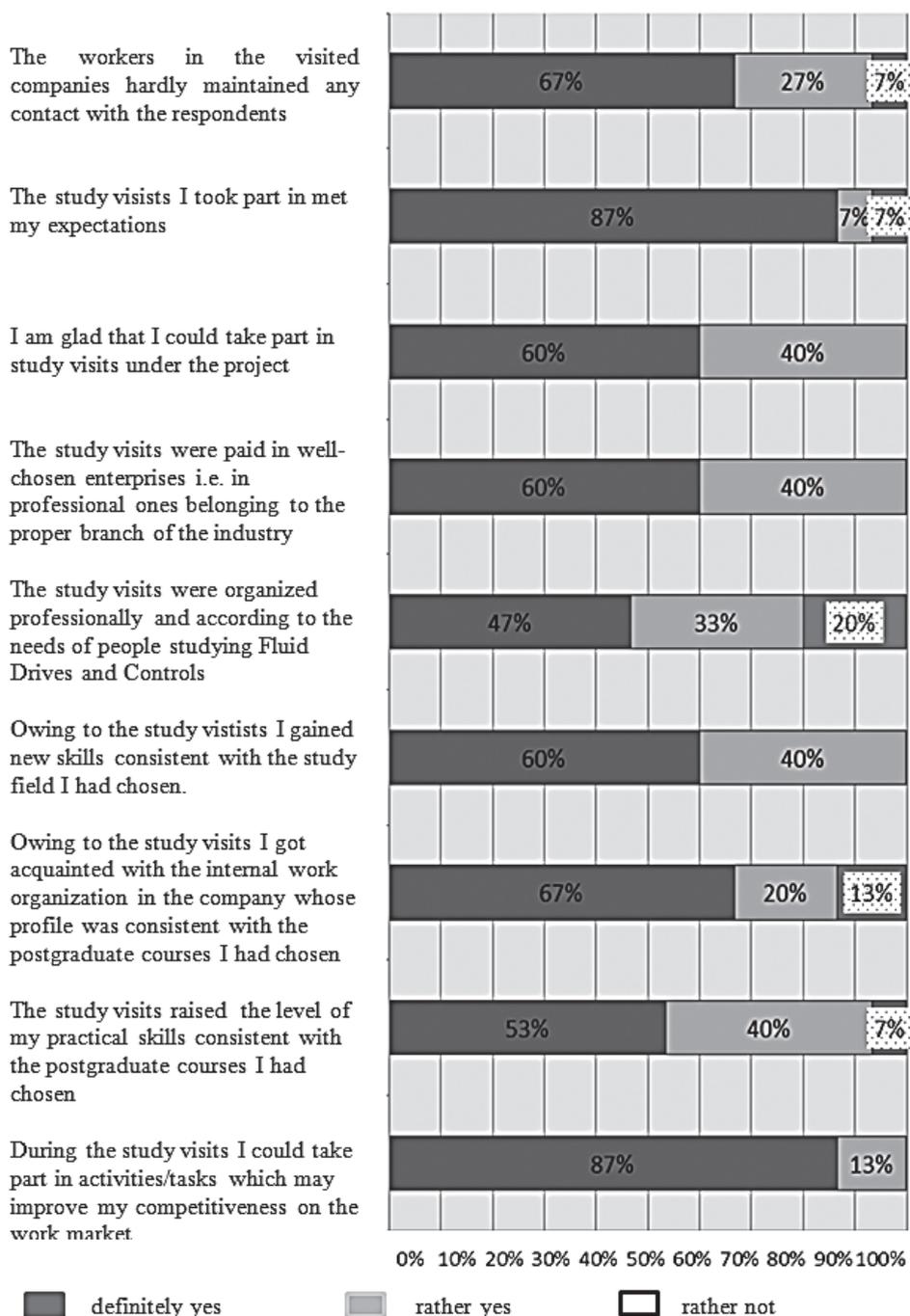


Fig. 7. Students' opinion on the aspects of study visits made during the PIT project: Source: Created by the authors, based on data from the CAWI interview with the students studying fluid drives and fluid control systems, $N = 15$

Among the weak points of study visits, the respondents mentioned the following issues:

- study visits were too short;
- the technical knowledge of some guides appointed by the company was inadequate.

According to the conducted research, the students and auditing students evaluated the possibility of taking part in study visits during the project as very good or good. The majority of students were satisfied with the visits and claimed that the visits met their expectations. According to the results, the majority of respondents were able to take part in activities/tasks which may have improved their competitiveness on the work market. Almost all of the respondents declared that the visited companies were well-chosen i.e. professional and belonging to the proper branch of the industry, and that the visits were well-organised and were able to meet the students' needs.

4.2. Entrepreneurs who took part in organising study visits for FDC students

The representatives of the enterprises in which the study visits were, were asked to value the reasons for their willingness to allow study visits during the project. They mentioned the following reasons:

- they had positive feelings about their previous collaborations with Cracow University of Technology;
- they were willing to acquaint the students studying fluid drives and fluid control systems with the techniques and products offered by their companies;
- they were willing to raise the students' interest in working within the company;
- they were willing to allow the students to consolidate their knowledge with practice.

All interviewed entrepreneurs claimed that the study visits met their expectations. 80% of them (four of five) declared that the study visits met their expectations to a very large extent, see Fig. 8.

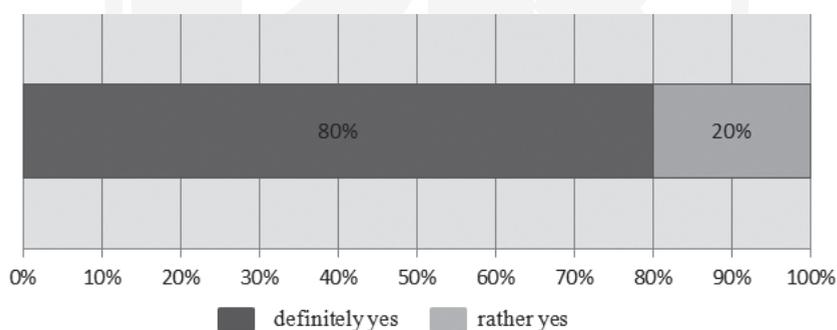


Fig. 8. Measurement of whether the study visit met entrepreneurs expectations. Source: Created by the authors, based on data from the CAWI interview with the entrepreneurs, $N = 5$

The respondents evaluated the positivity of the study visits as a type of collaboration between the university and their company as 'definitely' high (4 respondents, 80%) or 'rather' high (1 person, 20%), see Fig. 9.

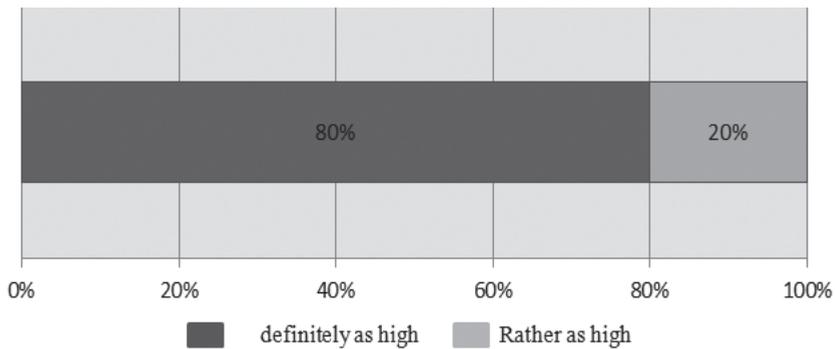


Fig. 9. How entrepreneurs evaluated the positivity of the study visits as a type of collaboration between the university and the company. Source: Created by the authors, based on data from the CAWI interview with the entrepreneurs, $N = 5$

All the representatives of the companies claimed that the project was either very highly innovative (3 respondents, 60%) or highly innovative, see Fig. 10.

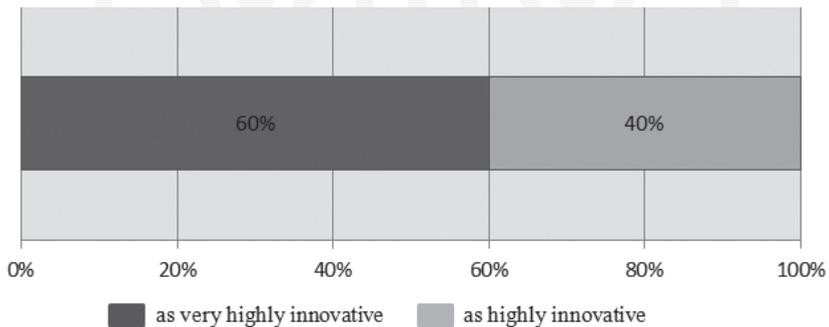


Fig. 10. How entrepreneurs evaluated the project with respect to the study visits (taking into account all the practical tasks, workshops and laboratory works conducted during the visits) Source: Created by the authors, based on data from the CAWI interview with the entrepreneurs, $N = 5$

According to the respondents, study visits were organised professionally and in a manner appropriate for the students' needs (see Fig. 11). The respondents claimed that such visits are beneficial for students for the following reasons:

- the visits gave students the opportunity to take part in task and activities which may raise their competitiveness on the labour market;
- the visits may provide students with more practical knowledge connected with the study field they chose;
- the visits may provide students with some practical knowledge connected with the organisation of work in the enterprise;

- the visits may provide students with knowledge and skills consistent with the profile of their chosen post-graduate courses.

Furthermore, the interviewees claimed that they were very glad to host the students in there companies.

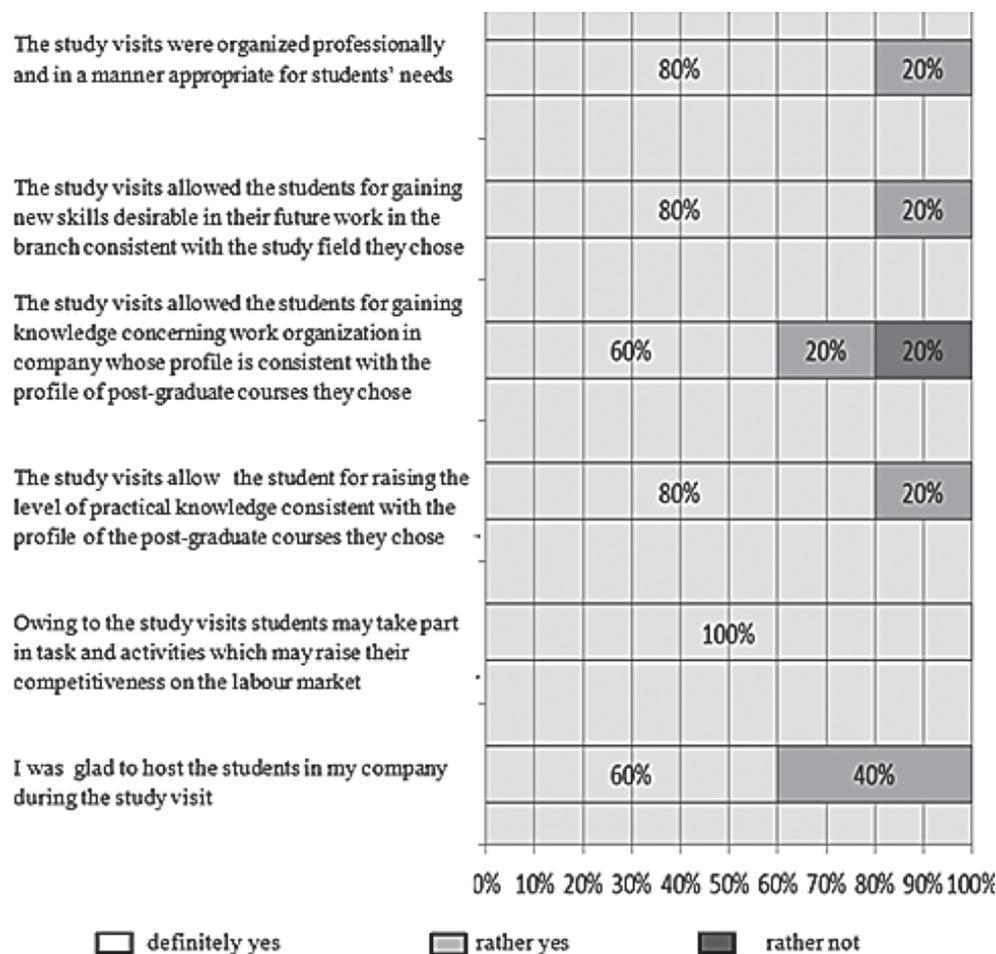


Fig. 11. Responses of the entrepreneurs to the statements connected with the study visits. Source: Created by the authors, based on data from the CAWI interview with the entrepreneurs, $N = 5$

According to the respondents, the main benefits of the study visits were their practical aspects and the possibility of the students gaining experience in this way. One respondent revealed that the university did not specify the topic of the study visit – this posed some difficulties during the visit. None of the respondents were able to indicate the aspects of study visits which should be modified. None of them made any suggestions concerning solving the issues which may possibly improve the quality of the visits. All of the respondents who

hosted the students claimed that their company was quite interested (60%) or definitely interested (40%) in organising such visits in the future, see Fig. 12.

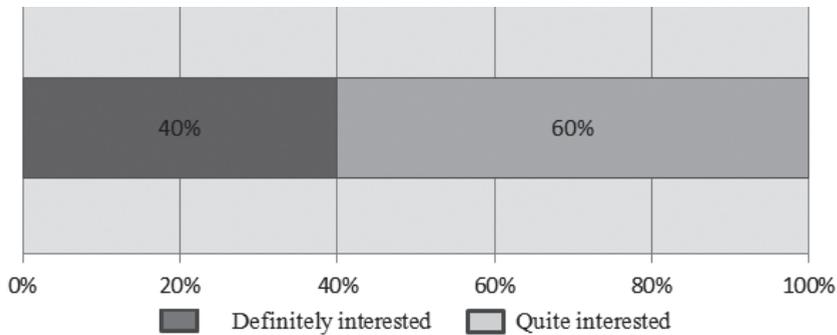


Fig. 12. The interest levels of entrepreneurs in organising study visits in the future. Source: Created by the authors, based on data from the CAWI interview with the entrepreneurs, $N = 5$

4.3. Conclusions

According to the research, students praised the study visits and declared that those visits were one of the highlights of the PIT project because the skills and knowledge gained during the study visits – including the contacts with branch specialists and employers – is quite unusual and cannot be acquired in any other manner. However, there were some remarks concerning some points of the study visit programmes, especially those which were purely theoretical. Furthermore, it was difficult to schedule the study visits as the companies preferred standard work days and claimed that between Monday and Friday, access to machines and employees is much easier. On the other hand, many students were already employed and would have therefore needed to take leave; thus, most of the study visits took place during the weekends.

The results of the interview with the entrepreneurs shed a light on the key role of study visits for students especially in gaining the practical experience which is the crucial issue during the recruitment process. Moreover, the study visits may contribute to the wider process of bonding the industrial and educational environments.

5. General conclusions

According to this research, the most important issue for the employers during the recruitment process is the experience of applicants. The first step towards gaining that experience may be study visits. By knowing the capabilities offered by the labour market, one could more sensibly shape their career path. Study visits are innovative tools which enable students to increase their level of knowledge and hone their practical skills. According to the obtained results, both the students and the entrepreneurs appreciated the essential role that study visits can play in the acquisition of highly-educated employees for innovative

businesses and in shaping students' future careers through obtaining valuable personal contacts. Therefore, the study visits were found to be indispensable in establishing and maintaining the bond between the university and private companies. Apart from that, it was widely claimed that study visits may greatly contribute to honing students' skills by means of consolidating their technical knowledge with practice. On the other hand, it was revealed that the study visits were very often too short, and sometimes guided not by the specialists but by the appointed workers whose technical knowledge was inadequate.

References

- [1] EU-Consult Sp. z o.o., *RAPORT EWALUACYJNY. Ewaluacja wstępnej wersji produktu finalnego projektu innowacyjnego pn. „PIT Mobilne studia podyplomowe we współpracy z przemysłem”*. Nie publikowany maszynopis, EU-Consult Sp. z o.o., Gdańsk 2013.
- [2] *Innowacyjne kształcenie na studiach podyplomowych*, red. A. Sobczyk. Wydawnictwo PK, Kraków 2015.

