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Graduate Career Tracking – a Case Study of a Faculty of Management in Poland

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Abstract

The aim of the article was to present a case study of graduate employability assessment of a faculty of management in Poland. The literature review showed that the main problem universities encounter while trying to track down the professional careers of their graduates concerns difficulties in contacting their alumni. It may be partially overcome by employing social media. The findings from the case study are in line with those of previous studies. The Faculty's decision-makers managed to increase the number of responses to their survey by using LinkedIn and Facebook. They collected valuable information on both the employability of their graduates, who, in most cases, progressed in their IT-related careers upon graduation, and the suggested changes in the curricula, e.g. organizing project management certification courses. The findings of the study may be useful to university decision-makers in their attempts to build efficient systems of graduate employability assessment systems.

Keywords: *employability; graduate tracking; graduate surveys; higher education.*

1. Introduction

Higher education in Poland has undergone a number of significant changes since the political transformation in 1989, when the centrally planned economy was replaced by a market economy. And just like in the entire Polish economy, in which before 1989 only 3% of people (outside agriculture) were employed in the private sector whereas the majority worked in large or very large state-owned enterprises, public universities dominated the sphere of higher education (religious schools were among the few exceptions). Studies, though tuition-free, were quite elitist - in the 1980s, enrollment rates oscillated around 10-12%. After 1989, there was a rapid development of non-public universities (the first one was established in 1991), and public universities began to offer some classes (mainly part-time and evening studies) in a paid mode

(Cieciora, 2014). The number of students increased from 400 thousand in 1991 to 1,223.6 thousand in 2023 (Statistics Poland, 2023), and the enrollment rates exceeded 70%. As a result of globalization processes and Poland's accession to the Bologna Process in 1999, Polish higher education sector has also become internationalized. As a result of these changes, a heated discussion regarding the importance of academic education for the work environment also started to develop in the academic and business world. While some of the academic community took the position that the main task of universities is to focus on scientific work, especially basic research, there were also voices that one of the most important duties of universities today is to provide the economy with highly qualified human capital. In other words, when planning and improving study curricula and teaching methods, academic decision-makers should take into account the requirements of the labor market. Previously, this was not given much attention. Firstly, because in the times of the centrally planned economy there was almost no registered unemployment, and secondly, because with low enrollment rates, university graduates had a privileged position on the labor market. The massification of higher education and the development of a competitive market economy changed this approach. Researchers and higher education authorities began to analyze the requirements of labor markets and the employability of graduates, and, relatively recently, the Ministry of Higher Education and individual universities started tracking the career paths of graduates (Cieciora et al., 2021). The Ministry of Higher Education developed and has been using since 2015 The Polish Graduate Tracking System called ELA (an acronym in Polish standing for the Economic Fates of Graduates). ELA obtains and processes data from the POL-on system of the Ministry and administrative records of ZUS (an acronym in Polish standing for Social Insurance Institution). On average, almost 92% of graduates of individual fields of study are registered in ZUS. ELA creates reports for cohorts consisting of at least 10 graduates. The data can be easily linked and merged thanks to the use of the national identification number PESEL (an acronym in Polish standing for the Universal Electronic System for Registration of the Population) as an ID in both of the centralized databases (Jasiński et al., 2017; Rocki, 2024b, 2024a). Stakeholders – universities, employers and individual people can access the data concerning average salaries of graduates of all types and modes of studies, faculties, universities in a chosen year of graduation for free. The advantages of ELA are its objectivity, reliability, standardization, and country-wide scope. However, the data is aggregated and the system, also due to data protection legislation, cannot reveal information concerning individual graduates. Universities, therefore, undertake research on their own, regarding specific groups of their graduates, usually trying to obtain more detailed data. However, there are no standardization or centrally developed procedures for this type of research and universities do not have the necessary tools to obtain full, reliable, and in-depth information on the employability of their alumni. Nevertheless, some of them try to collect and analyze such information in order to improve the quality and attractiveness of their educational offer. The purpose of this article is to present a case study – an attempt to monitor the career progress of graduates of master's studies conducted by the management faculty of one of the

leading non-public universities in Warsaw, Poland. First, a concise literature review on the ways of tracking down graduate employability will be presented. Next, a survey-based attempt to contact the alumni and obtain feedback on the impact that the studies had on their professional careers will be described. Finally, the conclusions drawn from the graduate employability tracking down project will be presented and discussed.

2. An overview of literature review on tracking down graduate employability by individual higher education institutions

Numerous studies have attempted to analyze the issue of tracking down employability of graduates by their *Alma Maters*. Several lines of evidence show that universities resort mainly to graduate outcome surveys (Acero et al., 2023; Hojda et al., 2022; Pentang et al., 2022; Pico-Saltos et al., 2021), sometimes combining the information obtained from the surveys with data from country-central systems (Balogh & Sipos, 2020; Gatt et al., 2021; Tseng et al., 2024). The main challenge connected with using this tool are low response rates in surveys, still decreasing in the course of time (Connell et al., 2023). Hynninnen (2022) made an interesting observation that the response rates may depend on the progress of the professional career of the respondents – the less successful ones are less likely to complete the surveys (Hynninen et al., 2022). Sometimes mere tracking down graduates may pose a challenge in case they do not answer emails – one may then consider using social media such as Facebook or LinkedIn to try and find the missing alumni (Jackson & Bridgstock, 2018; Woolley et al., 2015).

3. Case study – measuring the employability of graduates of second-cycle studies at the Faculty of Information Management at Polish-Japanese Academy of Information Technology

3.1. Faculty of Information Management – general description

Polish-Japanese Academy (formerly School) of Information Technology (PJAIT) is a non-public university. It was founded in 1994 in Warsaw and has been developing dynamically since then. Its oldest and largest faculty is the Faculty of Computer Science. The Faculty of Information Management was established in 2003 and is currently the third largest faculty at PJAIT (next to the Faculty of Computer Science and the New Media Art). The number of students at the Faculty has been systematically increasing - from around 40 in 2004 to 742 in 2024. The Faculty offers studies combining education in the fields of computer science and management. First degree (Engineer's) studies last 7 semesters (full-time studies) or eight semesters (part-time studies). Since 2020, the Faculty has also been running second degree (Master's) studies (3-semester full-time studies and 4-semester part-time studies), whose graduates have a choice of two specializations: the more technical Architecture of Information

Systems and the more business-oriented Business Analysis and Application of Big Data Tools. The first graduates of the Master's studies graduated from the Academy in 2022.

3.2. Graduate Survey 2023

In 2023, the Faculty authorities made the first attempt to evaluate the learning outcomes of graduates of the Master's studies. They already had some experience with analyzing the employability of graduates of the Engineer's studies – the last such analysis was conducted in 2020. It was based on data from the ELA system and information obtained from a survey sent to all graduates of the Faculty. One of the conclusions drawn from conducting the first graduate employability study was that the survey cannot be too long (which was a mistake that was made when creating the first survey, the length of which was criticized by respondents). The new modernized and updated survey, created as a Google Form, contained fewer questions than the previous one – e.g. a long and detailed section devoted to the assessment of the value of all individual courses was replaced with two general questions concerning the evaluation of education of the use of IT tools in management (such as programming, Cloud Computing solutions, specialization subjects) and education regarding "soft", "non-engineering" aspects of management (such as negotiations, public speaking, Agile project management methodologies or creating start-ups). The first, metric part of the survey included questions about the specialization, mode of study, gender, employment status (employed or unemployed), industry and size of the company employing the graduate and the graduate's current position. Optionally, graduates could also provide the information on the amount of their earnings and the name of the company. The first part ended with a question about the perceived impact of the studies on the professional career of the respondent. The second part of the survey focused on evaluating the quality of the studies. In addition to the aforementioned question about assessing the "hard" and "soft" knowledge and skills acquired during the studies, respondents were asked to assess the substantive knowledge and commitment to work of the teachers, the organization of the studies (schedule, forms of checking the learning outcomes), the equipment of the rooms and laboratories and the quality of the software. Finally, respondents were asked whether they would choose the same studies again if they could turn back time, whether they would recommend introducing any changes to the study curricula, and whether they see a need to introduce any new studies (e.g. postgraduate studies). The most important results of the survey will be presented in the subsection below.

As far as other data taken into consideration in the learning outcomes analysis are concerned, the Faculty authorities checked the data from the ELA system. The information they derived from the ELA register was quite positive – the median wage of the graduates was 1,06, i.e. higher than the average in their region, none of them was unemployed and the average job search span was only 0,78 month (*ELA*, n.d.). They did not, however, try to include the GPA (grade

point average) variable in the analysis as all the graduates achieved a very high GPA (above 4,5 in the 2,0 to 5,0 scale).

3.2.1. The course of the Graduate Survey 2023 project

The survey was sent to all 68 graduates of the Master's studies, to their school email addresses (graduates can also use them after graduation). In the first week, 8 people completed the survey. Due to the low response, the Dean's office (including the Dean herself) tried to contact the remaining graduates by searching for them on social media: Facebook and LinkedIn. They did not manage to identify the social media accounts of 30 graduates. Of the remaining 30, 13 did not react to the messages sent to them via social media and 17 responded and completed the survey (sending responses from private, not the Academy's addresses). Altogether, the survey was completed by 25 people - 14 men and 11 women. 14 respondents graduated from the IT Systems Architecture specialization, and 11 finished the Business Analysis and Application of Big Data Tools specialization.

3.2.2. 2023 Graduate Survey Results

100% of respondents were employed, and all of them were employed in either IT companies, or IT-related departments in various industries (banking, energy, electronics production, pharmaceuticals, media), in positions related to IT creation or management, such as process analyst, system architect, full-stack developer, production engineer, project manager, software tester, Product Owner, Senior Technician, IT administrator/DevOps, junior project manager, or production engineer. 80% of respondents worked in large companies (over 250 employees), 12% in small companies (10-49 employees), and 8% in medium-sized companies (10-249 employees). 4 people provided information on their earnings – they significantly exceeded (over three times) the national average salary in Poland. When asked whether completing Master's studies at the Information Management Faculty had an impact on their professional career, 76% of the interviewees responded positively, indicating that they received a pay rise, were promoted, or changed jobs for better ones. 24% of respondents stated that it was too early for them to make such an assessment. When it comes to assessing the quality of education in PJAIT, 64% of respondents highly rated the substantive knowledge regarding the use of IT tools in management and 68% highly rated the substantive knowledge regarding "soft", "non-engineering" aspects of management. Individual critical remarks concerned individual teachers and the excessive emphasis on teaching Scrum (which was present in several courses), while positive comments emphasized the focus on the practical knowledge and skills. 68% of respondents highly rated the organization of studies and the technical equipment of the Academy. Full-time students in their comments highly valued the organization of classes in the afternoon and the evening, thanks to which they could combine professional work with studies. They also praised good contact with the faculty authorities, high competences of staff and a friendly, individual approach to students. Suggestions for improvement concerned the

installation of air conditioning in all rooms (not only in selected laboratories) and the possibility of introducing a permanent hybrid form of studies, in which part of the classes would be held remotely (studies were conducted remotely only during the COVID-19 pandemic), the organization of a ceremonial graduation and a meeting of alumni after a few years after graduation. Respondents also recommended adding the topics of AI application in business and law in new technologies to the curricula and organizing some certification courses (e.g. in Agile methodologies, PRINCE2, PMI).

4. Conclusions

The main goal of the research was to discuss a case study of graduate employability tracking conducted by an IT-oriented management faculty of a non-public university in Warsaw. Consistent with the literature, this research found that the main challenge of such a project is to try and contact the alumni as most of them do not check their school emails after graduation. It also confirms the usefulness of resorting to social media, especially LinkedIn and Facebook to overcome the problem and find the missing graduates.

The Faculty of Management Information decision-makers carefully analyzed the survey results. They organized a meeting of the Program Council - a body which includes, apart from the Dean and two Vice-Deans, representatives of the Faculty's students and representatives of employers. The survey results were discussed. Students agreed with the suggestions of their senior colleagues regarding the correction of the substantive content of the courses, e.g., concerning the amount of time devoted to the Scrum component. They also suggested changing the order of some courses. Employers offered their suggestions regarding the inclusion of AI topics in most of the courses taught. Most of the recommendations were accepted by the Dean and the Vice Deans of the Faculty. On the whole, they were satisfied with the results of the learning outcomes study, as the information derived both from the ELA system and the graduate survey showed that the Master's studies educational offer of the Faculty did match the requirements of the demanding labor market and the graduates could easily find attractive, well-paid jobs, in line with their education. They also highly valued the constructive critical remarks that showed the room for improvement. The Dean and the Vice-Deans also decided to create and implement the procedure of obtaining written consents from students to contact them after graduation with the use of their private emails on the day of their diploma defense examination to facilitate the future graduate employability tracking process. Finally, they agreed to start working on building a prototype of a computer-assisted employability tracking tool and organizing an alumni club.

Despite the interesting findings and the practical implications, this study is not without limitations. The main weakness is the relatively small sample size of respondents and the scope of a case study. Further studies are needed to explore the topic of finding efficient ways of

increasing survey response rates and combining data on employability derived from different sources to obtain comprehensive and reliable information on the educational outcomes.

In spite of its limitations, the authors believe that the study adds to the growing body of knowledge on tracking down graduate employability and that its findings may be of interest to higher education decision-makers in their attempts to build efficient graduate employability tracking systems.

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