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**USE OF COACHING TO IMPROVE THE SKILLS OF
YOUNG ENGINEERS AND IMPROVE THE COMPANY'S
IMAGE**

**WYKORZYSTANIE COACHINGU DLA POPRAWY
KWALIFIKACJI MŁODYCH INŻYNIERÓW I POPRAWY
WIZERUNKU FIRMY**

Abstract: Professional group, which is most difficult in our country to recruit are besides manual workers – engineers. The organization of vocational training during higher education

does not guarantee future engineers proper practical preparation. When graduating from universities they are trained only in theory for future responsibilities. There are opportunities to use the experience of 50+ occupational group for the implementation of future engineers to work providing opportunities for development as well as ensuring the improvement of wages of employees in retirement age. An additional benefit is the improvement of company's image. The article presents the statistics of the conditions on the labor market and the ability to complete the project which is to create a dual study program for first degree full-time students of the Silesian University of Technology with the use of practical knowledge of 50+ workers as internal coaches (trainers) in companies interested in acquiring and developing talents.

Keywords: human resources management, coaching, dual studies, talent development, activation of 50+ people

Streszczenie: Grupą zawodową, którą najtrudniej w naszym kraju zrekrutować, to poza pracownikami fizycznymi – inżynierowie. Organizacja praktyk w ramach studiów wyższych nie zapewnia przyszłym inżynierom odpowiedniego przygotowania praktycznego. Kończąc uczelnie, są przygotowani jedynie teoretycznie do przyszłych obowiązków. Istnieją możliwości wykorzystania doświadczenia grupy zawodowej 50+ dla wdrożenia przyszłych inżynierów do pracy z jednoczesnym zapewnieniem możliwości rozwoju, a także zapewnieniem poprawy zarobków pracownikom w wieku przedemerytalnym. Dodatkową korzyścią jest poprawa wizerunku firmy. W artykule przedstawiono statystyczne ujęcie uwarunkowań na rynku pracy oraz możliwości zrealizowania projektu, jakim ma być stworzenie programu studiów dualnych dla studentów studiów stacjonarnych pierwszego stopnia Politechniki Śląskiej z wykorzystaniem wiedzy praktycznej pracowników 50+ jako coachów (trenerów) wewnętrznych w przedsiębiorstwach zainteresowanych pozyskiwaniem i rozwojem talentów.

Słowa kluczowe: zarządzanie zasobami ludzkimi, coaching, studia dualne, rozwój talentów, aktywizacja osób 50+

1. Talent Shortage

The market is becoming increasingly competitive. The advantage is not only to choose products but also sales potential of the companies. The role of HR becomes crucial in building the organization's strategy. Personnel policy requires long-term planning to ensure access to needed skills at every stage of company development.

The unemployment rate among young people in Poland is 27.3% and exceeds the EU average. The guarantee of education for young people in Poland was recorded in the form of law. It provides among others young job seekers job placement services including mainly matching the employer with employee with the right qualifications, vocational guidance and new tools of professional activation. The big problem, however, is effective coordination of activation measures.

Another problem is the segmentation of the labor market - the percentage of people employed on fixed-term is the highest in the EU (26.3% in 2013 up to 13.7% in

the EU), and the difference between the average salaries of employees on permanent contracts and temporary staff is the highest in the EU (36.8% in 2010.). 66.8% of employees employed on fixed-term can not find a permanent job. New regulations, which take effect in the current year (2016), are to change the situation of persons employed on civil-law contracts and reduce significantly their use, however, it does not eliminate the source of the problem (and this is in the labor code).

More and more employers are aware of the risks posed by the lack of action in the development of the talent management strategy. One fifth of companies do not, however, take any action in this direction exposing the company to a huge risk of a decline of competitiveness and productivity. One of the biggest problems is the lack of candidates with experience in the workplace, and most often undertaken strategy to combat Talent shortage - inefficient methods of training employees. According to research of global leader in the field of HR consulting – ManpowerGroup¹ – 36% of employers globally and 33% of companies in Poland indicate a shortage of talent. One of the professional groups that are hardest to get are engineers.

Table 1. Occupations most affected by shortage of talent in the world, in Europe and in Poland

Tabela 1. Zawody dotknięte największym niedoborem talentów na świecie, w Europie i w Polsce

No.	Occupations most affected by shortage of talent in 2014*		
	World	Europe**	Poland
1.	Skilled manual workers	Skilled manual workers	Skilled manual workers
2.	Engineers	Engineers	Engineers
3.	Technicians	Sales representatives	Production operators
4.	Sales representatives	Technicians	Sales Managers
5.	Employees of accounting and finance	Members of the management / staff at the highest level	Drivers

* according to the opinion of respondents in answer to the question: *Finding which occupations is a problem for your company?*

** research results of ManpowerGroup EMEA (21 European countries, Israel and South Africa)

Source: ManpowerGroup Report, Warszawa 2 July 2014.

According to the report from 2014, the largest deficit of workers applies to those with technical qualifications: skilled workers, engineers, computer scientists, production operators and technicians. Key findings from the study - 2013 (38.68 companies were examined), revealed that one-third (35%) of global companies declare difficul-

¹ ManpowerGroup Report, Warszawa 2 July 2014 (http://2014_Niedobor_talentow_informacja_prasowa.pdf).

ties in filling positions due to the shortage of talents (32% in Poland). In comparison with 2012 the situation worsened considerably when it comes to the problem of lack of qualified candidates, and the greatest difficulties employers have in recruiting manual laborers, secondly - engineers and sales representatives (tab. 1).

Companies responsible for the recruitment indicate that the talent shortage is caused by a lack of competence or lack of available candidates for the position. The situation has not changed since 2012.

The most common reasons for difficulty in filling positions (Table 2) are: lack of technical skills (34%), lack of candidates (32%), lack of experience of the candidates (24%), lack of soft skills (19%). Here, as the main deficiencies are mentioned areas such as lack of commitment / motivation (5%), lack of interpersonal skills (4%), lack of professionalism (problems with appearance, punctuality – 4%), problems with the flexibility and ability to adapt (4%). Candidates often have excessive salary demands (11%). Moreover, in some regions of the world, the cause of talent shortages (eg. in Japan up 81%) are aging population and low unemployment rate. In this respect, Poland is at 26th place among all countries surveyed.

Table 2. The most common reasons for difficulty in filling jobs by surveyed employers in the world, in Europe and in Poland

Tabela 2. Najczęstsze powody trudności w obsadzaniu stanowisk pracy wg badanych pracodawców na świecie, w Europie i w Polsce

No.	5 main reasons for difficulties in filling positions in 2013 [%]*	Europe**	Poland
1.	No technical skills of candidates	35	50
2.	Lack of available applicants / candidates	37	30
3.	Lack of experience in candidates	25	15
4.	Lack of communication skills of candidates (soft skills)	14	5
5.	Too high financial expectations	10	18

*according to the opinion of respondents in answer to the question: *What you think are the reasons behind the talent shortage?*

**research results of ManpowerGroup EMEA (21 European countries, Israel and South Africa)

Source: ManpowerGroup Report Warszawa (http://2013_Niedobor_talentow_Raport_ManpoweGroup.pdf), p. 16.

Talent shortage, according to respondents, has the average (in 35% of cases) or large (19% of cases) impact on the company's ability to provide customers with the expected level of services². Employers observe very dangerous tendencies that cause a shortage of talent³ (tab. 3):

² Ibidem; ManpowerGroup Report Warszawa (http://2013_Niedobor_talentow_Raport_ManpoweGroup.pdf), p. 9.

³ ManpowerGroup Report Warszawa (http://2013_Niedobor_talentow_Raport_ManpoweGroup.pdf), p. 2.

- reducing the commitment and creativity of employees (which results in an increase in employee turnover),
- reducing the competitiveness and productivity of businesses.

Report presented by of ManpowerGroup 2 July 2014 involved 37 thousand respondents from 42 countries, including 751 from Poland confirmed the disturbing trend. Although in 2008-2010 the problem in recruiting workers declared every other entrepreneur, and in 2014 – every third, the trend has changed direction again and is increasing in 2013 to 32% and in 2014 – 33%.

Table 3. Effects of the shortage of talent in companies – globally

Tabela 3. Skutki niedoboru talentów w firmach – globalnie

Effects of the shortage of talent in companies – globally	[%]
Restriction on the provision of services to customers	43
Loss of competitiveness / productivity	39
Increased staff turnover	25
Weaker innovation and creativity	22
Higher payroll costs	21
Weaker engagement / employee motivation	21

Source: ManpowerGroup Report, Warszawa 2 July 2014.

The most common strategy to combat the lack of suitable candidates is to provide additional staff development and training. Recruitment is expanding beyond the local market. Also recruitment strategies seem to change. Another way is concentrating on securing future talent resource, consisting in cooperation with educational institutions. It is based mainly on a joint curriculum development suited to the market needs⁴.

The situation of young people in the labor market remains uncertain for many years, and the youth unemployment rate is still high. The biggest challenge is the professional activation of young people, older people and women⁵. Alarmingly high in Poland is the percentage of the population at risk of poverty or social exclusion. Although decreased in recent years (30.5% in 2008 to 25.8% in 2013), it still remains above the EU average.

So far the most serious problem when it comes to employment was the use of fixed-term contracts by employers. This form allowed to survive the difficult period of catching up after the political transformations in Poland, however, is focused on products and services for low- and middle-stage technology, labor-intensive and low-skilled. The main challenge for the Polish economy now is to transform low-

⁴ Ibidem, p. 13.

⁵ Commission Staff Working Document, National Report – Polska 2015r., Bruksela, dnia 26.02.2015 r., SWD (2015) 40 final, p. 6 (http://cr2015_poland-pl.pdf).

-cost and labor-intensive economy, employing low-skilled workforce in an economy based on innovation, and this requires higher skilled workers. The growth is severely inhibited by demographic factors, which if not corrected by solid demographic policy of the country, can be supported only by the willing to work migrants. So far, Poland is one of the countries with the least favorable long-term demographic forecasts on the ratio of older people against the population of working age⁶.

Polish companies are characterized by high profitability, which does not translate, however, entirely on higher investment on the grounds that the labor-intensive nature of production also affects the need for modernization of production facilities and the replacement of physical capital⁷. An economy based on innovation requires high-quality human capital. Persisting in Poland, low activity rate of some social groups, continued segmentation of labor market, as well as too little geographical and occupational mobility, make it difficult to improve the unfavorable situation.

Still a problem in coordinating the labor market is insufficient number of qualified in this direction public employment services. The amendment to the Act on Promotion of Employment and labor market institutions has made many positive changes. Profiled (individual) approach of public employment services for the job seekers was introduced. Also guidance and counseling was improved. There would also be new measures in the form of vouchers for professional activation, loans from the Labor Fund and activation benefits for employers of parents returning to work after maternity leave. Also provisions on flexible working time (moving and intermittent time work) were introduced, but only a small percentage of companies implemented such solutions (data until May 2014)⁸.

Report, which is a working document of the Commission Services – National Report - Poland 2015 clearly demonstrates the major challenges in the field of education encountered by the Polish education system, and especially concerning the quality of education. Subjected to doubt the usefulness of the current effects of education on the labor market. The problem is also common in Poland phenomenon of the necessity for a completely re-training as a condition of employment. The problem of graduates at all levels of education is still firstly the low level of knowledge of foreign languages, and secondly - IT (Information Technology) skills. Studies show that the education system does not manage to equip students in sought by employers competences: analytical skills, problem solving skills, critical thinking, teamwork, and creativity. Shared platform for distance education (e.g. e-learning, e-books), are only theoretical form of education.

Training in professional skills, and the engineer can not be a theoretician, must begin for a certain group of occupations, even at the stage of secondary education

⁶ Commission Staff Working Document, National Report – Polska 2015 r. ..., p. 11.

⁷ Ibidem.

⁸ Ibidem, pp. 17-18.

(technical schools, vocational schools). If the prospective student does not have some practical skills starting studies he must acquire them as soon as possible during their studies. From several years there is a clear tendency that better results during studies at universities of technology reach extramural students⁹. It is obvious that these are working people, with several years of professional experience that are often technical graduates. These are people that already at the stage of secondary education have chosen the path of professional education (or technical) for various reasons, and soon started work. Since years, there is tendency, which leads the best graduates from junior high to choose high schools as the next stage of education. Technical College is usually chosen by students with more mediocre results in science, preparing rather to work after school than to continue their education at a higher level. And indeed, usually after graduation they undertake job. However, it is no longer true that high school diploma is sufficient, even vocational one, to have a stable workplace in the future¹⁰. The higher the education the greater flexibility when looking for work, but only for those who also have the experience. That is why today a better situation on the labor market have the graduates who have previously completed Technical College or graduates of part-time studies, even those at high schools, who started work after graduation and then returned to the path of education while gaining professional experience. The hardest part of getting a job have graduates of daytime studies, who have never worked professionally. Most often these are the people without any practical preparation for work¹¹.

The reform of education introduced in Poland since the academic year 2012/13, which places emphasis on the vocational training, still does not reach tangible effect in improving the cooperation between enterprises and educational institutions. One of the most important challenges is to enable learning through vocational training in the workplace.

The national goal is to achieve 45% the proportion of persons with higher education. There is however, a growing number of people who during their studies take up jobs that require only medium or even only low skills. This shows mismatches with the labor market, and this is the result of randomness in choosing jobs, or ineffective guidance. The amendment to the Higher Education Act, which came into force in October 2014, introduced a system of monitoring careers of graduates, enabled interdisciplinary studies focused on practice and dual studies carried out with employers, which are the ideal solution, but still poorly widespread in Poland¹².

⁹ from own observations as a lecturer - Department of Materials Science and Metallurgy, Silesian University of Technology.

¹⁰ GUS data: in 2014 the unemployment rate among graduates of technical colleges and vocational colleges was 35.5%, vocational school graduates - 43.5%, college graduates - 19.9% (Commission Staff Working Document, National Report - Polska 2015 r. ..., p. 20).

¹¹ <http://juventum.pl/technikum-vs-liceum/> (may 2nd, 2013, Szymon Kastelik).

¹² Dual Studies in Poland are innovative solution very popular in Western Europe; learning in

2. 50+ Coaching

Although a gradual increase in the employment rate of older people, i.e. aged 55-64 years can be observed, still the activity rate in this group is low. Introduced measures of vocational activation for older workers, such as subsidies for the salaries for employees above 60 years of age and record of limiting the use of the National Training Fund for the people over 45 years of age. Activation of people over 50 years of age is particularly difficult task and only limited progress was achieved here, according to the working document of the Commission Services¹³.

The age structure of business coaches in Austria includes people aged over 40 years (80% of respondents), while 50% of these people were aged 50+. For comparison, in Poland the age structure of coaches includes about 50% of those aged under 30 and about 40% at age 40-50 years. In Poland, a person with experience in the industry is seen as a competent coach, reflecting the confusion of coaching with consulting.

Analyzing a competence which should distinguish an effective coach, certainly always repeat such qualities as knowledge, skills and attitude. Predispositions are, however, an individual matter, because apart from the life and professional experience coach should have patience and ability to cooperate with other people, regardless of his attitude. Therefore features such as active listening skills, self-management and coach-client relationship-building will be required. It was found that what most attracts individuals to coaching is related to the concept of motivation. The most common is the belief that the future coach has something to share, has something to offer (he/she has a sense of mission and a desire to contribute to creating a better world); It is also a strong desire to help and be useful, even sacrificing themselves for others; in the end - the need to direct, effective influence and even manipulate (in the positive sense of the word). Coaching gives enormous opportunities for self-realization, fulfillment of passion and the opportunity for personal development. It must also be associated with much larger earnings than before.

The gradual extension of the retirement age will cause that in workplaces will be more and more experienced workers over 50 years of age. It is worth preparing a program that would allow release vacancies for young workers while continuing the employment of young people, to use the knowledge and experience of older workers, not pushing them to the margins in the home workplace, but raising their motivation to

practical form, after its completion student is fully adapted to work; in Poland they are carried out in cooperation with such companies as Phoenix Contact, Volkswagen Poznan and Poznan University of Technology (since 2013); student after graduating from dual studies in the aforementioned project, obtains a degree in engineering and the professional title in mechatronics - in the course of learning he is practically prepared to work; beneficiaries of such solution are 3 parties: the student, the company and the university (<http://studia-dualne.pl/studia-dualne-nowatorskie-rozwiazanie-wdrazanie-projektu-ksztalceniowego-w-firmie-phoenix-contact-wielkopolska-sp-z-o-o/>).

¹³ Commission Staff Working Document, National Report – Polska 2015 r. ..., p. 22.

action at the end of their careers giving the possibility for the transfer knowledge, and at the same time for increase of their earnings. Benefits for all can be invaluable.

Coaching means assisting people in getting what they want without doing it for them or telling them what to do¹⁴.

Improvement of employees can be carried out in the traditional manner using the courses and training with the use of the blackboard and chalk. Such improvement, ends usually by issuing a certificate of presence, often without an exam. This method leaves a trainee on their own with theoretical knowledge, without indicating how it should be translated into practical actions, not to mention using the theory in practice in workshops. This form of classes is being slowly put aside, mainly because interested people less frequently want only to obtain the certificate for participation in course. What counts are the practical skills. They verify workers at work. Therefore, modern training methods are activating methods, which require fully committed participation of the trainee, but not only – also require the full involvement of the person in the training (trainer, coach). Such forms can be implemented in a group (group training) or individually (coaching).

Personal development training, so-called coaching is a process that helps individuals in their personal development by working with a trainer (coach) in a particular area. Participant of the training is guided individually by a personal trainer to achieve the objective. According to psychologists, the trainee will remember only 20% of what is transmitted in the form of a lecture, while the 50-70-% of what is demonstrated and as much as 90% of what is trained.

Active participation triggers in the trained persons the following skills:

- better understanding of their own reactions and responses of others,
- improving communication skills – express thoughts and feelings, improve listening, consulting and non-verbal communication skills,
- giving and receiving help,
- conflict resolution.

The essence of coaching is to use the knowledge and skills that have already been trained and appropriate to motivate and focus the trainee to explore their own possibilities. A good coach will not teach, and certainly will not lecture, but he will let you to learn. This is not easy, primarily because it requires from the trainer special communication skills and those character traits that enable the generation of a suitable atmosphere during the coaching process. Regardless of whether it is group or individual coaching, participating individuals must be carefully chosen.

¹⁴ *Training materials for teachers and employees of school support institutions in the terms of School Organizers of Education Development, Białystok 2014 r., (http://www.sore_m4.odt) [as:] T. Stoltzfus, 2012.*

3. Dual studies

Dual studies are not the same as vocational studies and cannot be confused with vocational training. The difference between the two forms of training is mainly on the difference in their duration. The training lasts approx. one month, and in the framework of dual education student is working in a company that participates in the project for a period of two months of summer. In addition, during the academic year, the student spends at least one day a week in the company. During the subsequent years of study there are more and more days at work in the company until the third year, when there are three days (on the third year, the student stays in college only two days a week). Participation in such studies requires from students to work harder because it is a challenge for the extremely hard-working persons. Students get appointed guardians, whose main task beyond technical issues, is support at work in terms of content, at engineering level and according to the program of education. In each department, in which students take vocational training there is a guardian (coach), whose task is to support the development of participants.

The aim of the program is to develop and improve the competence of students and raising the potential and talent for the company, but the most important is to build practical knowledge of students.

Implementation of graduate of studies, a young engineer, to work takes an average of half a year and involves reviewing the organization's culture, processes, documentation, standards and devices. dual studies program uses a three-and-a-half years of engineering studies for such preparation. Student after such preparation can operate freely within entrusted to him tasks. Practice on a specific workstation take further long months. Three and a half years of studies may be laid out in such a way that students willing to prepare for work in a specific department could fit into work taking over the experience of the workers with the highest seniority and experience in the position.

According to the Job Market Catalogue of Silesian University of Technology¹⁵, internship offer for graduates, is 6-month program with salary and guaranteed release for the duration of classes. Trainees must be fluent in English as the primary language of communication for the duration of the internship. Employment after the internship is not guaranteed, but very likely.

Dual studies require intensive classes in English with subject area in which the company operates. Absolute condition for the success of the dual studies is to conduct at least 50% of courses in English, both theoretical in first semesters and practical in the company.

Employers perceive talent as the key to achieve business goals, it is reasonable, therefore, to find ways of acquiring and developing talent. The article attempts to

¹⁵ Job Market Catalogue – Employers and entrepreneurship job market, October 19, 2015, Silesian University of Technology (e-katalogGPIP2015.pdf).

identify opportunities for the development of engineers at workplaces. The possibility of creating such an organization of dual studies, where from the first to the last semester of learning larger and larger part of the course is conducted by experienced employees at workplaces in industrial plants. Additionally, to activate a group of economically active people aged 50+ proposed to use the knowledge and experience of these individuals as coaches (trainers) and enable them to actively participate in the dual studies giving the opportunity to introduce young engineers to work by passing on their knowledge and experience. Due to the fact that in Poland, there is demand mainly for engineers from all areas related to the optimization of production processes¹⁶, the following articles (a series is planned) will cover students and graduates of Engineering as research groups.

Preparation for participation in the Project of dual studies, will require agreement between the employers and universities. In the case of the Silesian University of Technology probable participants would be companies that in the framework of cooperation with the university offer vocational trainings and internships for years. It is the best solution because of already long-term co-operation, which gives the opportunity to take advantage of the existing agreements and developed experience. However, this does not rule out the possibility of participating in the Project other, willing to cooperate companies.

Companies seeking to participate will have to choose candidates for the coaching program from workers willing to cooperate within the framework of the Project over the age of 50 years, thus creating a group of internal coaches, which will devote part of their time working first on their coaching training, and then to work as a coach working with students (Fig.1).

Professionalism of internal coach is closely connected from one hand with practice and professional experience and knowledge of the culture of the organization, and from the other – with the completion of a specialist (accredited) course, which will under the supervision of professionals allow to develop in the next Coach all those qualities that will be required to work with young people¹⁷. Such coaching training, employees should start no later than at 50 years of age, progressively preparing to take the role of a coach in their company. They could also begin training earlier, deploying gradually to future responsibilities, and maybe at the beginning of training familiarize with the nature of work of the coach and deciding whether

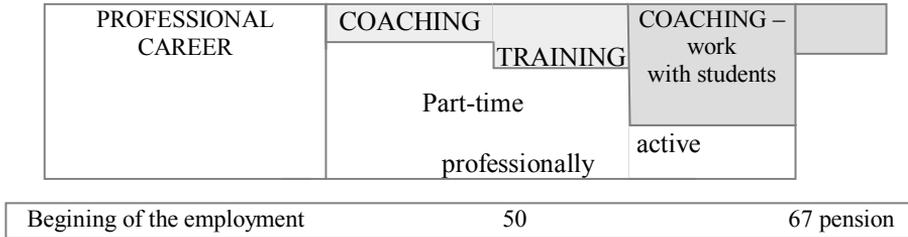
¹⁶ The article uses research results of ManpowerGroup, the global leader of innovative solutions in the labor market. Operating since 1962 around the world, and since 2001 has been supporting employers and candidates in Poland, where it has 40 agencies in 25 cities. The services the company are available through: Manpower®, Expertis™, ManpowerGroupTMSolutions, when looking for temporary or permanent work, looking for the results of research competencies of employees, employment, internal processes, outsourcing, HR consulting, career management and outplacement (www.manpowergroup.pl).

¹⁷ M. Kołodkiewicz, *Zestawienie oferty edukacyjnej szkół Coachingu w Polsce 2009* (<http://Raportszkola.dla.coacha.pdf>), pp. 11-12.

they want to pursue such a role. Such training could be carried out, e.g. in the form of participation in already underway coaching sessions.

Figure 1. Time distribution of coaching duties at Program startup

Rysunek 1. Rozkład czasowy obowiązków coacha przy uruchamianiu Programu

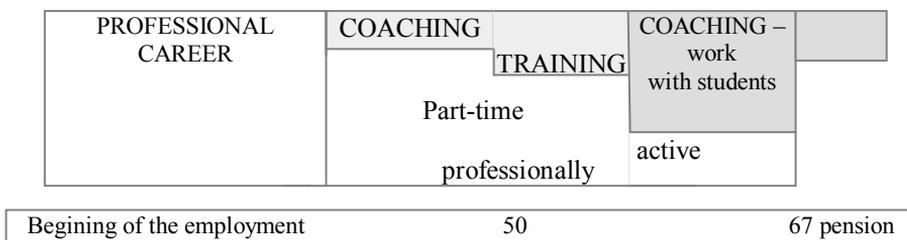


Source: own work.

At the time of launch of coaching program inclusion of training for volunteers would include people over fifty years of age in the form of intensive courses occupying 1/3 of working hours, which would already at this point create the possibility of employing new people at the company. After the training the coach would remain professionally active for 1/3 of working hours, devoting 2/3 to work with students (Fig. 1). After retiring, coaches willing to continue cooperation could still stay active by working with students or by training their successors.

Figure 2. Time distribution of coaching duties at Program startup, option I

Rysunek 2. Rozkład czasowy obowiązków coacha po uruchomieniu programu, wariant I



Source: own work.

After starting the coaching training program staff could start already, even after 45 years of age, e.g. one hour per week, and gradually expand to over 50 years of age (Fig. 2).

Figure 3. Time distribution of coaching duties at Program startup, option II

Rysunek 3. Rozkład czasowy obowiązków coacha po uruchomieniu programu, wariant II

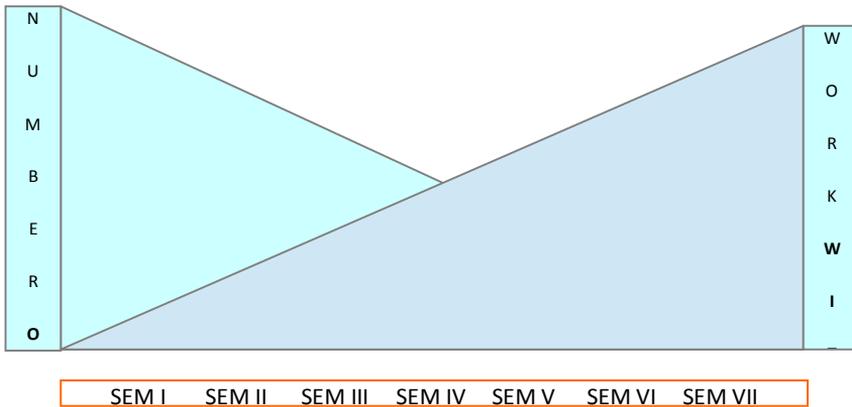
COACHING TRAINING PROFESSIONAL CAREER		COACHING – active with students	
	Part -time profession		
Beginning of employment	50		67 pension

Source: own work.

In another option (Fig. 3) coaching training could undertake workers willing to work at any time during their career. The choice of when to include coaching training in duties of some employees, would belong to the employer and would be dependent on the adopted personnel policy.

Figure 4. The ratio of theoretical (university - lecturer) to the practical classes (coach - the employer) during the first cycle (from semester I to VII)

Rysunek 4. Stosunek ilości zajęć teoretycznych (uczelnia - wykładowca) do praktycznych (coach – zakład pracy) w trakcie studiów I stopnia (od semestru I do VII)



Source: own work.

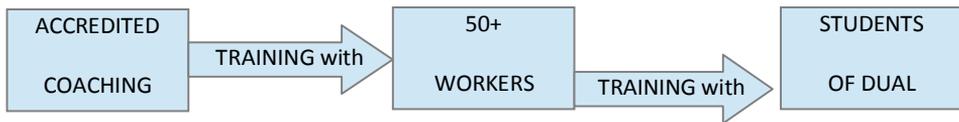
Also, time schedule of student work with the lecturers requires substantial alterations. Schedule will have to be constructed so that the maximum number of classes at the university (lectures, tutorials and laboratories) took place in the early semesters, while the closer the last semester, the more practical classes conducted by coaches at various positions in chosen by the student workplaces. The ratio of theoretical and practical classes in the course of the study is presented graphically (Fig. 4).

Students who decide to take up studies in the dual system for the entire period of study are bound by a contract with only one company, where they will attend paid internship, and upon graduation besides higher education can also boast 3 years professional experience.

The project is not simple, but feasible, as evidenced by dual system studies operating for many years in many European universities, as well as in Poland. It required the involvement of companies, university and coaches training unit (Fig. 5).

Figure 5. The chain of links between the three parties involved in the framework of dual studies using the group of 50+ employees

Rysunek 5. Łańcuch powiązań pomiędzy trzema podmiotami zaangażowanymi w ramach studiów dualnych z wykorzystaniem grupy pracowników 50+



Source: own work.

Summary

This article is an attempt to implement a new form of training for future graduates of daytime faculties of Technical Universities. Subsequent publications are planned based on rigorous statistics of career paths of graduates of the Technical Universities and the structure of employment in selected companies and their aim will be to determine the number of persons who may be involved in the project of coaching training for students on dual studies.

Organization of dual studies requires the creation of a unique grid of hours, which can be used by students willing to participate in the project and for logistic organization of movement of students between the university and the workplace. A system of scholarships will have to be implemented. The scholarship must cover the costs of travel, accommodation and meals during the student's stay in the workplace. In addition, those whose academic performance is at the highest level should get a higher scholarship. The initial costs which they will have to pay the entrepreneur will be associated with cyclical coaching training for their employees. With the development of the project the costs will be lower and lower, as active coaches will be able in the coming years train their successors. The activity of an accredited coaching school in the project will be reduced rather to the role of advisor, as well as monitoring active coaches and testing new ones.

Activation of 50+ people who are often on the margins of life at the end of career, will allow the appreciation of the professional knowledge and appreciation of

their contribution to the development of the company. The company providing such opportunities at the end of their careers, and at the same time giving the opportunity to obtain higher earnings before retirement improves its image and has a very specific advantage in attracting those who want to pursue their professional career. Students participating in the dual studies, who could benefit from the knowledge of experienced employees faster and better implement the obligations that are waiting for them in their future careers. Being accompanied by older workers in the first months of practice they will not learn by trial and error, searching for solutions to problems on their own. Coach will give help and advice. Project implementation will reduce employer costs of the search for talent and the amount of expensive training that has been organized by the employer wanting to introduce young workers to work.

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