# Life after Graduation: The Role of Hiring Graduates and Follow up Systems for the Continuous Development of Education Plans and for Improving Quality in the Higher Education

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*Abstract* — The scientific paper aims at presenting the way in which the partnership between the university and private or state funded organisations insure the development of applicative training of students. Also there are analysed, besides others, the way that graduates can promote with there contribution to improve the quality of the services and products offered by organisations which have implemented a quality management system.

*Index Terms* — quality, students, scientific research, employer, education.

## I. INTRODUCTION

In the current economical context the analysis of employer's perception over the higher education graduate's level of applied practical training needs to permanently constitute the main focus of the higher education institutions management.

Graduate's evolution within hiring companies shows the higher education institutions capability to insure complex and competitive professional training programmes, in strict accordance to the work market's requirements.

Successfully managing the partnership between the higher education institutions and the employers insure the adjustment and also the development of learning programmes necessary to scientific research evolution towards applicative research, in direct connection to employer organisations necessities.

The same partnership can insure the companies' employees' participation to the post-graduate study programmes organized within higher education institutions.

According to their personal skills, students must be guided so that even from the first years of higher studies to manage to set their major and also the work place they really want to get after graduation.

It is quite common that higher education institutions resources and students resources are wasted due to the fact that students don't have a vision regarding what they want to do after graduation and thus, select fields of activity which, after a few years, turn out not to meet their expectations, or for which they do not have skills, and give up the years they have spent learning, refocus on other majors.

In order to permanently insure the quality of the learning process and the adaptability of the curriculum to current requirements, higher education institutions have to permanently follow the impact of the work market forces evolution and of the governmental programmes on the students.

Education in itself can be defined as a series of measures that are permanently applied in a systematic way in order to form and develop man's intellectual, moral and physical qualities.

Human communities' relations are based on a continuous and mutual learning process.

The education system's quality still represents a challenge and a demand for the elite, passing through permanent reform, representing a natural progress factor.

One of the strategic objectives that need to be followed throughout the post graduate training projects' unreeling is that of preparing, from a practical point of view, the students, using modern teaching methods, so that at the end of the programme, students can apply immediately the knowledge they accumulated within the organisations in which they currently carry on their activity.

A few modern teaching methods in the higher education are presented in figure 1.

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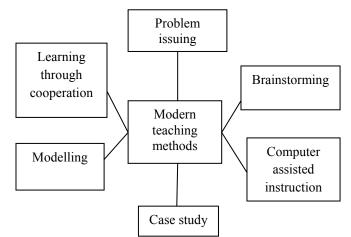


Fig. 1. Modern teaching methods in higher education

The characteristics of modern methods used in higher education are the following:

- they are focused on learning, exploring, research, action;
- o they are active-participative for students;
- o it encourages students' thinking and creativity;
- it promotes cooperation between students and democratic teacher-student relations;
- it offers the teacher the role of the learning activity planner and tutor.

Based on research, the characteristics of a quality educational system are as follows:

- it understands the interrelation between the suppliers and the beneficiaries involved in the education offer;
- o it is orientated on result;
- o it is offered by responsible institutions;
- it is centred on customers the beneficiaries of the educational services;
- o it is based on innovation and diversity;
- o it is promoted by educational leaders;
- it respects individual autonomy and has at the basis institutional autonomy;
- it is done by dialog and through partnership;
- it insures the participation of educational actors and human resources valorisation;

To this extend, the results of the International Master – Policies and Institutions in Quality Management programme can be mentioned, done at the Polytechnic University in Cluj-Napoca.

## II. CASE STUDY

Today, more than ever it is important to look beyond the internal quality of the higher education institutions' environment.

Thus, we will be able to analyse, from a scientific point of view, the quality of learning, the quality of students, their ability to contribute, from a qualitative point of view, to the progress of society, in a tight connection with their professional fulfilment.

Following the students' options and career, we will get the extremely important feedback, which contributes, to the continuous development of several themes' curriculum. This feedback is essential for the process of insuring the university educations' quality and to guide the higher education institutions to achieve the short, medium or longterm strategy.

For both the professors and the organisations managers, changing learning conditions, intellectual development conditions, the manner of doing business, represents a challenge as well as an extra opportunity to prove their skills.

Both the organisations' employees and the students need to become more confident in their own strengths and organisations' leaders need to identify the most suitable methods to motivate them in this sense.

Especially today, due to aggressive increase of competitiveness in the internal and external environment, we have to give up the reactive management and to act permanently proactive, to exploit to a maximum the prognostic managerial function.

The mission of these programmes is that of completing the theoretical knowledge acquired by the students after their studies with practical skills, specific to the area of expertise for which they are training.

Speciality practical training within state or private organisations, done based on signed agreements give the students' real chances to find a workplace suited for their training.

At the same time, graduates will be able to cope, from a professional point of view, with the demands of the work place, having the possibility to become professionally integrated in a short period of time after graduation.

Taking into consideration the ever increasing demand in the field of engineering in the job market and also that one of the main demand of the private companies regarding students training is insuring practical training in their field of expertise, higher education institutions need to show special attention developing students theoretical knowledge with applicative, practical training.

To this effect universities must develop partnerships, based on practice conventions, with private organisations.

The organisation of these partnerships is an opportunity to bring face to face the employers and those seeking a job.

In order to support the scientific cognition process, the creation of governmental programmes, investment programmes, and system programmes and well defined dynamic structures are necessary, which should be sustained by executive behaviours and by permanent positive enforcement.

Next we will present some of the facilities, which are granted, to economic agents that hire higher education institutions graduates.

Through governmental programmes, states institutions offer employers who hire graduates several financial incentives from the unemployment insurance budget, under the provisions of the number 76/2002 law.

Thus, higher education graduates and graduates of special schools, registered with the Agency for Work Force Occupation, in case they are included in the normal working schedule for a period of more than 12 months, benefit from a bonus equivalent to a minimum gross salary per country, in force at the time of hiring.

Also, graduates who have been established with unemployment benefit and get a job within the period in which they would benefit from it, for a period longer than 12 months, benefit from an amount equal to the unemployment benefit to which they would have been entitled, under the law, until the period in which they would have benefited from it is over, if they wouldn't have gotten a job.

Employers, who hire education institutions graduates for an undetermined period of time, receive on a monthly basis, over a period of 12 months, for each graduate:

- 1 minimum gross salary per country, in force at the time of hiring, for the training schools graduates or arts and crafts schools graduates;
- 1.2 minimum gross salaries per country, in force at the time of hiring, for high school graduates or postgraduates;
- 1.5 minimum gross salaries per country, in force at the time of hiring, for higher education graduates.

Employers who hire over an indeterminate period of time graduates with physical disabilities receive monthly, for each graduate, the above-mentioned amounts over a period of 18 months.

Employers who hire graduates under the conditions mentioned above are forced to maintain the employment relationship for at least 3 years from the time of hiring.

During the 3 years period graduates may attend a form of professional training, organized by the employer, in accordance to the law.

The expanses required for the professional training will be borne, at the employers' request, from the unemployment benefit budget.

According to number 27 law from March 26/2007, regarding stimulating hiring pupils and students, the employer who hires pupils and students during the holidays benefits from a monthly financial incentive equal to 50% of the minimum gross salary per country guaranteed in payment, for each pupil and student.

The financial incentive is awarded at the employers' request from the unemployment benefit budget.

The maximum period for granting the financial incentive is of 60 working days in a calendar year.

## III. RESULT ANALYSIS AND DATA INTERPRETATION

The main objective of these applicative programmes is that of creating a speciality, coherent technological practice program for all students.

In order to reach this goal, within the University representative organizations are assigned county wide.

There is a three week practical training with a daily schedule of minimum 6 hours at the end of the second term

Within this programme, the themes and activities, which are going to take place during the practice period, are defined.

The University must assign the teachers who will be in charge with the technological practice.

These teachers have to coordinate and check the practice

ISBN: 978-988-19251-2-1 ISSN: 2078-0958 (Print); ISSN: 2078-0966 (Online) activity within the organisation they were assigned to carry out the practice programme.

Also, the organisation in which the practice programme is taking place assigns a person who will be in charge of the practice, with well-defined tasks in following the students' activity.

The practice training programmes will be finalised through practice colloquium.

At the end of the training programme, the students will draw up an activity report which will be presented at the practice colloquium and which will be graded by a commission formed by the head of the major department, by the person in charge of the practice from the Universities side and the representative of the organisation in which the practice programme has taken place.

In order to manage the practice programme, within the organisation an applicative schooling plan was drawn up which is presented in figure 2 (which is a capture made by a software in which the case study had been done).

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!	aprovizionare, Prezentare ternatica proiecte	Director Servicii post Vanzare, Sef atelier PKW	07.07.2009		68	03	10	13	14	15	16	17	20	21
	Practica in cadrul compartimentului Receptie auto, Proceduri de													
	lucru. Operare DMS	Consilier service, Responsabil contracte companii asigurare	08.07.2009		<b>GRI</b>								GR3	GF
	Prezentare generala produse service si softuri specifice													
,	MBiFordiChrysler JeepiDodge	Sef atelier PKW	09.07.2009		GR2	<b>GR1</b>								GR
	Practica in cadrul atelierului PKW, diagnosticare electronica,													
	operare/documentatie teknica	Consultant tehnic PKW	10.07.2009		GR3	GR2	<b>GR1</b>							
	Practica in cadrul atelierului LKV, diagnosticare electronica,													
.	operare/documentatie teknica	Sef atelier LKV, Consultant tehnic LKV	13.07.2009			GR3	GR2							
	Practica in cadrul atelierului ATV, diagnosticare electronica,													
.	operare/documentatie tehnica	Sef atelier PKV, Sef atelier ATV	14.07.2009				GR1	GRI						
	Practica in cadrul compartimentului Aprovizionare - comenzi piese													
	schimb MB si CHJ, operare softuri, proceduri de lucru	Pesponsabil comenzi piese schimb	15.07.2009					GR2	GRI					
	Practica in cadrul compartimentului Aprovizionare - comenzi PS													
	Ford, operare softuri, proceduri de luoru	Responsabil comenzi piese schimb	16.07.2009					GR3	GR2	GRI				
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2	garantie Mercedes-Benz si Chrysler Jeep - prezentari PPT	Responsabil Garanti, Sef atelier PKW	2107,2009									GR2	GP1	
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chipal:GR1	Poponea, Irimie, Velea	Talpos												
chipall: GR2	Deacu, Nistor, Claru	Filichi												
chipa IE GR3	Cazila, Dinca, Halmaghi	Zan												
	Tematica proiect practica													
	Analiza comparativa servicii de Mobilitate: Mercedes-E Analiza tarife practicate: reparatii autovehicule avariate													

Fig. 2. Applicative schooling plan - The Gant Map. Capture

#### Gant Map JULY 2009

- Work Protection. Introductory notions After sale Services;
- Supply office chief, Post sales Service Manager
- 2. Lotus, DMS introductory notions, supply and service procedures. Project themes presentation;
- Post sales Service Manager, PKV shop chief

3. Practice within Motor Vehicle Reception compartment. Work procedures. DMS operation;

Service Advisor. Person in charge for insurance companies' contracts

4. Service product and specific MB/Ford/Chrysler Jeep/Dodge software general presentation;

PKV shop chief

5. Practice within the PKV shop, electronic diagnosis, technical operation/documentation;

PKV technical consultant

- 6. Practice within the LKV shop, electronic diagnosis, technical operation/documentation;
- LKV shop chief, LKV technical consultant
  - 7. Practice within the ATV shop, electronic diagnosis, technical operation/documentation;
- PKV shop chief, ATV shop chief
  - Practice within the Supply department parts order, MB and CHJ change, software operation, work procedures;
- Person in charge for spare parts orders
  - 9. Practice within the Supply department PS Ford, software operations, work procedures;
- Person in charge for spare parts orders
  - 10. Practice within the Management department, work procedures. Emphasis on SDVs, locations. Complaints upon goods delivery;
- Supply, Management office chief
  - 11. Ford guarantees system, Definition of the Ford guaranty concept PPT presentations;
- Person in charge for Guaranties, PKV shop chief
  - 12. Mercedes Benz guaranty system, Definition of Mercedes Benz and Chrysler Jeep guaranty concept;
- Person in charge for Guaranties, PKV shop chief
  - 13. Ford, Mercedes Benz and Chrysler Jeep mobility service. Ford Fleet Contracts and Mercedes Benz Service Contracts/PPT;
- Person in charge for Guarantees, Service Advisor
- 14. Project themes themes to process/teams;
- Service Manager Sales post
  - 15. Project themes themes to process/teams feedback;
- Sales post Service Manager

Daily 9.00 o'clock meeting in the classroom for schedule presentation; move to the work areas.

There are formed 3 teams and the coordinator for each team is elected – Team coordinator.

## Team

Practice project themes:

- 1. Mobility service comparative analysis;
- Practical tariffs analysis: wrecked motor vehicle repairs, mechanical works, electrical works, special works;
- Road assistance services comparative analysis. Comparative analysis: Service Packages, Mystery Shopping, 'Customer' – approach manner, availability, time for scheduling.

Based on this schooling plan, the students were able to get to know in detail the organizational structure of a private organisation that activates in the service rendering industry of motor vehicle repair.

At the end of the practice internship, the person in charge at the private organisation has to send to the University all documents related to the practice programme that took place (documents related to students attendance, their contribution to the programme) and the students evaluation results based on the grades they received. The centralizer related to students' activity management is found in Table I (which is a capture made by a software in which the case study had been done).

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4	Deacu Cornel	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Α	Ρ	Ρ	Ρ	CP	ULB	S FB
5	Dinca Constantin Adrian	Ρ	Ρ	Ρ	Ρ	Р	Ρ	Ρ	Р	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	CP	ULB	S FB
6	Zan Danut	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Α	Α	Ρ	Ρ	Ρ	CP	ULB	S FB
7	Nistor Alexandru Ioan	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Α	Ρ	Ρ	CP	ULB:	S FB
8	Olaru Radu	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Α	Α	CP	ULB:	S FB
9	Irimie Rares Ioan	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	CP	ULB	S FB
10	Velea Ioan Alexandru	Α	Α	Α	Α	Α	А	Ρ	Α	Ρ	Α	Α	Ρ	Ρ	Α	CP	ULB	S B
11	Halmaghi Nicolae	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Р	Ρ	Ρ	Α	Α	Ρ	А	CP	ULB	S FB
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In order to improve the collaboration, the University representative will send the private organisation the feedback received from the students, alongside suggestions regarding the development of future practice programmes.

Students have been extremely receptive and the practice programme was a real success proving once again that organizing a quality programme is the way to acceptance.

The advantages of these applicative programmes are also possibilities for the students to take from the organisation themes for the diploma project on which they could work together with the guiding teacher and, if possible, with a specialist within the organisation in which they carried out their applicative training internship.

At the same time, the organisation has the possibility to select students who meet their employment requirements.

### IV. CONCLUSIONS

The management and diversification of educational programmes has brought new development opportunities in the last decade, for more people to benefit from University education and postgraduate education, aiming to bring a significant contribution to education.

Together with the ever increase demand for University education, higher education institutions have developed new and diverse study programmes, creating at the same time new learning and study modalities.

Through the partnerships between the Universities and the private organisations, students get into direct contact with quality management systems.

Thus, students can observe the major differences that exist between the organisations that have implemented a quality management system and those that didn't consider the implementation of the system opportune.

Universities should manage to stimulate students' desire to bring their contribution to societies' progress, a demarche that must begin in the last year of secondary education.

According to the pupils' skills, both the parents and the

teachers need to guide him towards a high school that will insure the students' preparation for the higher education unit in which he wants to continue his studies.

Students must be guided toward active implication in extra curriculum activities, especially at international level, actions that involve acquiring and developing intensive communication skills.

Also, students have to be instructed regarding teamwork since the first year of college.

While within the University their performances depend on their individual work, after graduation, individual implication is not enough for teamwork.

Students must be able to fit in the already existing and well-defined structured teams at the employers' level.

To this extend, students must acquire knowledge about their personality, about their temperaments, which they need to learn how to shape to the best of their abilities.

It is recommended that students be advised to choose their working place according to their temperament.

For example, a melancholic type temperament student must not choose a job that requires constant interaction with the customer or managing conflict situations.

Organizing common programmes and practice applications by the Universities together with the employers, facilitates the integration of higher education graduates within the companies that are willing to give them a job.

Through well-structured programmes, higher education institutions need to insure students' evolution follow up in the work place for a period of minimum 5 years.

The quality of higher education cannot be insured without getting the feedback regarding graduates' integration and evolution within the hiring companies.

In return, graduates need to be encouraged and supported to continue their post graduate studies, even after they have been integrated in the work place, so that, they could now bring their own contribution to the continuous development of scientific research. The results of this process should be effectively applied at the graduate's work place.

In today's economic context, by getting involved in the unfolding of these programmes, employers receive benefits and advantages as a consequence of their own employees following the post graduates master and PhD studies, programmes which especially develop employees' creativity and structured logical thinking.

## REFERENCES

- [1] Collins J. *Excelența în afaceri*, Editura Curtea Veche Publishing, București, 2010.
- [2] Daniels A. C. Managementul performanței Strategii de obținere a rezultatelor maxime de la angajați, Editura POLIROM, București, 2007.
- [3] Grecu A. Rolul metodelor activ participative în creşterea eficienței învățării la disciplina "Educație tehnologică", Editura Universității Lucian Blaga, Sibiu, România, 2009.
- [4] Jenson R. Piramida succesului Organizații de succes prin oameni de succes, Editura Codecs, Bucureşti, 2010.
- [5] Littauer Florence, *Personalitate plus*, Editura Business Tech, București, 2004.
- [6] Oprean, C., Ţîţu, M. Managementul calității în economia şi organizația bazate pe cunoştințe, Editura AGIR, Bucureşti, 2008.

- [7] Ţîţu, M., Oprean, C. Managementul strategic şi al dezvoltării durabile în organizația bazată pe cunoştințe, Editura AGIR, Bucureşti, 2011.
- [8] Țîţu, M., Oprean, C., Grecu D. Influența stilurilor de management asupra nivelului de performanța în organizațiile bazate pe cunoştințe care au implementat un sistem de management al calității , "The 6th International Seminar QUALITY MANAGEMENT IN HIGHER EDUCATION – QMHE2010", Tulcea, 8-9 iulie 2010.
- [9] Ţîţu, M., Oprean, C., Grecu, D., Tănăsescu Cristina, Ţîţu Mariana, The Scientific Analysis of the Competitive Advantages provided by the Production System Toyota – Just in Time, Osaka Japan, 17-20 June 2010.
- [10] Oprean, C., Ţîţu, M., Grecu, D., Tănăsescu Cristina, Oprean Camelia, Ţîţu Mariana, A Study on Mapping Processes in Organizations Based on Acquaintances. A case study, Osaka Japan, 17-20 June 2010.
- [11] Oprean, C., Tîţu, M., Grecu, D. The Influence of the Temperaments on the Performance Level in the Knowledge-Based Organizations which implemented a Quality Management System., The 6th International Seminar QUALITY MANAGEMENT IN HIGHER EDUCATION – QMHE2010, Tulcea, Romania, 8-9 iulie, 2010.
- [12] Ţîţu, M., Oprean, C., Grecu, D. Ensuring Global Satisfaction according to the Management of the Relationship with Clients. The 6th International Seminar QUALITY MANAGEMENT IN HIGHER EDUCATION – QMHE2010, Tulcea, Romania, 8-9 iulie, 2010.