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ENTREPRENEURSHIP AT THE CONTEMPORARY UNIVERSITY (ON THE BASIS OF AN EXAMPLE OF THE TECHNICAL UNIVERSITY OF GABROVO)*

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Abstract:

The actuality of the subject is determined by the following conditions and prerequisites:

- ✓ The competition between the universities at national level and in the European educational space;
- ✓ The students as quantity and quality decrease;
- ✓ The options for financing from the state budget are relatively limited;
- ✓ The practical skills of the students as a training result are far behind the real business requirements.

These negative trends can be overcome by developing and approving the so called “third generation” universities. The Technical University of Gabrovo has already started entrepreneurship implementation as an organically inherent part of education and scientific research. The already operating centre for entrepreneurship encouraging at the university, our traditions in applied explorations and the relationship with a number of universities abroad are a convincing proof for that.

This is the second time that we win a competition for public procurement of Ministry of Economy, Energetics and Trade under the subject “Establishment and Development of Centres for Entrepreneurship Encouragement at the Higher Schools in Bulgaria”.

In the paper we analyze our achievements in the field of entrepreneurship function, the existing problems, the difficulties and the ways of overcoming them.

Keywords: entrepreneurship; third generation universities; education; applied research.

* The paper is presented as submitted to the Secretariat.

1. Introduction. Conditions and prerequisites for incorporation of entrepreneurship into the structure of a third generation university.

1.1. Underlying rationale

As university lecturers we are stirred by the desire to respond to the challenge of fundamental changes that have been taking place in the recent years. In the age of IT technologies traditional universities are undergoing a transformation toward the status of "third generation" institutions of higher learning. Major tendencies which that transformation is attributed to are as follows:

- Recent years saw considerable development of **interdisciplinary research** and intensive co-operation between different types of organizations: scholarly, educational, business, public, etc.

- Intensified **competition between universities** due to cyberspace and e-media plus the increased possibilities for students and teaching staff mobility. Both science and education are more and more involved in the game of market competition.

- Universities have transformed into a favourable ground for development of new economic activities based on high technologies. Entrepreneurship, business incubators, informal investors' clubs and partnerships with companies in the tertiary sector have been formed along with high tech pools and technology based businesses.

- Further progress of co-operation **between universities and business.**

- Increased possibilities for solution of **global problems** – environmental, social, health and others by means of creating an open system for collaboration and interaction in the field of technology innovation.

Future belongs to universities which tend to develop into joint entrepreneurship oriented organizations. We are aware of the necessity to undertake numerous changes toward adopting the model of "third generation" university.

1.2. Conditions and prerequisites underlying the necessity to develop entrepreneurship on university ground

Common (external)

- In "third generation" universities entrepreneurship function is indispensable as are academic training and scientific research

- Entrepreneurship is instrumental to commercialization of innovative ideas (they get practical implementation);

- Financial challenges faced by universities are solved by entrepreneur companies

- *Specific for our conditions*

- The adopted policy of the Ministry of education and science will impose the demand for individual sources of funding which could come from some type of economic activity;

- University traditional relations with business should be restored and intensified;

- Entrepreneurship may prove a potent remedy to heal the discrepancy between theoretical background(academic training) and the demands of practice;

- Shortages in government funding (underfunding) will necessitate entrepreneur activity as a possible form of financial back up.

The Centre for Encouragement of Entrepreneurship will focus on bridging the gap between science and application; between training and scientific research. A sober analysis of said challenges and the progress so far made in the development of TU-Gabrovo indicate that this strategic objective could be implemented by following these directions:

- training in entrepreneur skills for academic staff and undergraduates enabling them to open their own business;

- stimulating entrepreneur initiative and attitude in undergraduates creating in them awareness and conviction that an individual business run by them is feasible and attractive career opportunity;

- creating business and other related skills needed in turning business ideas and goals into successful enterprises;

- building close relationships with businesses and their involvement in the hands-on training of students;

These are the directions that can be followed by our university in its attempt to stimulate students' initiatives in entrepreneurship; teaching them *how to start and keep up their own business*, to support them *with suitable ideas and stimulate them to see their ideas implemented or consult them* with proper evaluation, marketing research and during their quest for adequate funding. It should be our commitment to see them full rounded would be entrepreneurs.

In this way we are making a serious attempt to create a favourable environment for developing entrepreneurship on a *regional level*. Our town has built a rich heritage of *traditions* in laying the foundations of and developing entrepreneurship during the times of Bulgarian national revival. These foundations formed the

backbone of the then town industry. Encouraging entrepreneurship and active involvement in starting own business are of major importance with regard to *generating employment, opening new jobs, keeping degree holding specialists* in the country and last but not least *raising the standard of living*. By stimulating entrepreneurship we hope to become more attractive among undergraduates both on national and international level and raise our competitiveness in attracting possible investors from companies and government agencies.

2. Activities done so far to promote entrepreneurship within TU-Gabrovo

2.1. Entrepreneurship curricula of TU-Gabrovo before the opening of the Centre for Entrepreneurship.

Starting from academic year 1990/1991 our university offers a degree course in "Industrial Management" and from 1994/1995 r.we offer another part-time(paid) course in "Entrepreneurship and Management".

1. Different core disciplines are included in the study plans of Bachelor and Master courses taught in our School(Faculty): "Theory and Implementation of entrepreneurship", "Entrepreneurship and entrepreneurial behaviour", "Company management", "Economy and management of enterprise", "Marketing", "Planning and forecasting" etc, all of which ensure needed knowledge and competence for entrepreneurial activity that are required by the qualification characteristics.

2. The university Centre for post graduate qualifications offers minor courses for graduates of engineering schools(faculties) in "Entrepreneurship and management", "Structure and management of companies" and some others which aim at both widening and linking the scope of their engineering background with knowledge in the field of entrepreneurial business.

3. A pilot course in entrepreneurship was first started in TU-Gabrovo in 2004 as part of a joint Bulgarian- Flemish project which was carried out in two stages: stage one " Business according European rules" and stage two: " Building up Entrepreneurship Centres". Within the framework of this project there were training sessions in entrepreneurship with lecturers from TU-Gabrovo followed up by such sessions with 69 undergraduates and young entrepreneurs from the region of Gabrovo.

4. Developed syllabus for professional qualification " managing economist" included in the course of "Entrepreneurship and management" has been taught in two courses in TU-Gabrovo during 2005 as part of the PHARE program BG0202.01.YI.4.11 "Incubator without walls". Raising the share of young people's employment by means of stimulating business enterprising; main contributor –" High tech business incubator- Gabrovo"

5. for the period 2007-2008 we have implemented the first stage of the Contract for organizing specialized Centre for Promotion of Entrepreneurship which was awarded by the Ministry of Economy, Power Industry and Tourism.

What has been done so far appears to be a tangible ground and evidence to the fact that we are on the right track. We are bound to carry on.

2.2. Organizing a Centre for Entrepreneurship Promotion

Within the frame of the public contract for „Organizing centres for promotion of entrepreneurship at I institutions of higher learning in Bulgaria" awarded by the Ministry of economy and power industry, №229/20.12.2006 Technical university of Gabrovo, has organized such Centre which functions since December 2006.

In summary we can say that the function of said Centre for the last two years can be described as taking place in the following directions:

2.2.1. Training academic staff and undergraduates in entrepreneurship.

1. A study plan has been developed in three levels including 12 disciplines. The basic level was intended for students who have not studied disciplines related to entrepreneurship during their academic studies. This discipline is entitled „Cultural principles of entrepreneurship, business and management" or „Theoretical and practical foundations of entrepreneurship" (for Master courses).

The first level is directed to students who are willing to start their own business. It includes core studies in „Marketing instruments in business", „Practical handbook for business plan drafting", „Company personnel", „Company financial management", „Data systems in the company", „Standardization and systems for administration".

The second level addresses lecturers, entrepreneurship trainers and acting entrepreneurs. It includes disciplines such as

„Instruction guide on writing and implementing projects”, „European requirements for entrepreneurs”, „Analysis and utilization of financial statements”, „Innovation policy and investments”, „Methods and techniques for improved results”.

For each discipline that is included in the syllabus there is a relevant program developed according to approved structure. Teaching materials in all disciplines included in the syllabus have been developed as electronic version.

2. A number of courses have been conducted with undergraduates ,postgraduates and faculty in accordance with the levels of the syllabus. The first level has been taught to about 2/3 of all students at TU-Gabrovo and about 100 students have covered the entire three level course. Likewise, four groups of postgraduates and assistant professors have been shortlisted for covering the full course.

3. „Theory and Implementation of entrepreneurship” has been included as optional (elective) discipline in Master programs.

2.2.2. Promoting Centre’s activity

1.Promoting materials have been developed for better illustration of Centre’s activity such as promotion brochure, logo, website. A workshop with postgraduates and faculty has been conducted discussing the position and role of the Centre in the university structure. A quarterly newsletter is also published covering the most important issues of the Centre’s activity.

2. There is a considerable amount of contacts and interaction between the four similar centres instituted by the same Contract awarded to and functioning at (Sofia university of forestry, Technical university of Varna ,Technical university of Plovdiv and Technical university of Gabrovo) which interact under the principle „*by competing we interact*”

3. Also two thirds of the university students have been polled through two inquiries. The main objective of the inquiries was to probe students’ attitudes and intentions related to a prospective entrepreneurial activity after their successful graduation.

The overall number of inquired students as well as their distribution by Faculties and majors do guarantee the veracity and sample precision of the information acquired.

Entrepreneurial attitudes among first and fourth year students in TU –Gabrovo have been sampled by their answers to the question: „Do you intend to start your own business after your

successful graduation?” (Fig. 1). 46,3 % of freshmen and 51,5 % of senior undergraduates were positive in their answers.

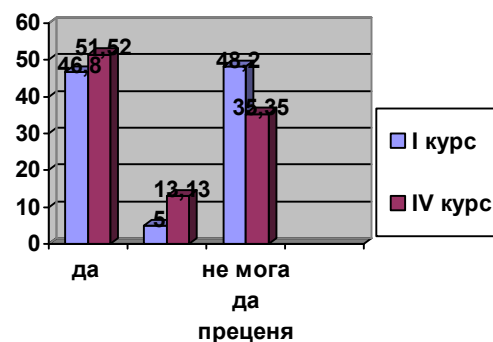


Fig.1 „Do you intend to start your own business after your successful graduation?”

A relatively high percentage of those who declared their prospective entrepreneurial intentions were also positive about their intention to stay and develop their own business in Bulgaria. Students were also probed for their intention to emigrate by answering the question „Do you plan to remain and work in Bulgaria?”. 62,3 % of all first year students and 68,18 % of those who are about to graduate have answered positively .

The larger part of students is in the opinion that Bulgaria provides relatively normal conditions for starting and developing their own business. Evaluations of the business climate in Bulgaria have been made based on the answers to the question „Do you think that Bulgaria provides proper conditions for developing individual own business?”. Definitively negative answers comprise just 4,8 % of all inquired first year students and 8,59 % of all fourth year students. Overall percentage of those who responded positively from first year students is 89,9 % and 87,37 % with fourth year students. This high regard of the business climate in Bulgaria could be attributed largely to the high percentage of students who declared their intentions for prospective business development on home ground.

2.2.3. Presentation of good practices

1. Based on materials collected from inquiries conducted with businessmen from the region plus the heritage and experience of Gabrovo entrepreneurs, we wrote and published a guide book entitled „Tips for entrepreneurs”, which could be of good help to prospective entrepreneurs.

2. Two student contests have been organized with the task to develop best working business idea worked out in the form of a business plan.

3. In a joint effort with the Centre for transfer of technologies at TU-Gabrovo, there have been conducted several information workshops in the towns of Pleven, Veliko Tarnovo and Lovech.

4. A special event, "Entrepreneur's Day", was conducted during which was organized a meeting between trainees and young businessmen from the region. Another workshop, with participants from the academic staff of the university, has been organized to present the outcomes of the activity of Centre for Promotion of Entrepreneurship.

5. Similarly, these results were presented at a number of scientific conferences at home and abroad.

3. Forthcoming events and activities

Training in entrepreneurship is a big challenge for the head administration, faculty and students of TU- Gabrovo. The successful start and follow up activities of the Centre for promotion(encouragement) of entrepreneurship plus the apparent interest and availability for active involvement in its activities on behalf of the academic staff are good prerequisites for its successful work.

What has been done so far will be expanded and built on in the following directions:

- profiled training of students who are willing to start a business in specific economic sectors and trades;

- Practical orientation of training aiming at building professional skills and preparing prospective entrepreneurs for their daily round of activities in a company. For this purpose there will be developed business scenarios, simulated games in which a specific case study should be solved such as recruitment of personnel, application for funding, drafting various types of documents, conducting marketing research etc.

- Selecting teams of experts to consult and support students in developing their own businesses, evaluation and implementation of technical ideas, research on market demand of their products, supply of financial resources, and other related activities

- Psychological support for students' motivation to become well determined

entrepreneurs., overcoming various psychological barriers (change in mindset) developing entrepreneurial culture among them, etc.

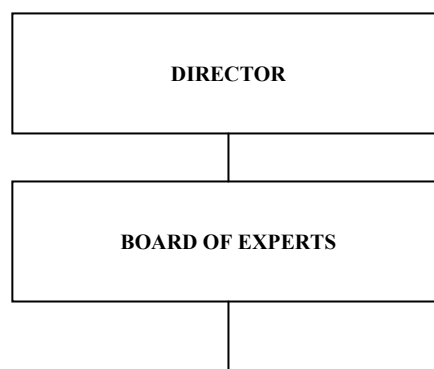
- Developing financial pools for supporting starting companies and granting free financial support;

- Application for funding from various EC sources and national programs;

- Opening of businesses run by students.

We plan to develop matrix type of management of CPE as is seen in Fig .2. For this purpose there will be formed groups of consultants operating in respective branches such as marketing research, legal analysis, intellectual property protection, finance and accounting analysis. Ideas proposed by entrepreneurial teams will undergo a multiple aspect analysis and evaluation by relevant experts. Those ideas that performed best on the market will be tested by the Board of experts of the Centre.

This type of managerial set up will be transferred to the overall managerial structure of the university. In reality it will be entrepreneur oriented. Teams made up of engineers, economists and managers will operate as supervisors of students' theoretical and practical training and will help their business realization. The University Board will determine the areas of research, education and business that will be dealt with by it.



GROUPS OF CONSULTANTS	ENTREPRENEURIAL TEAMS							
	1	2	3	4	5	6	...	N
MarketingMap кетинг	x				x			
Technology based and other innovation ideas		x		x				
Forecasting	x					X		X
Legal analysis		x	x					X

Protection of intellectual property	x		x	x				
Finance and accounting analysis			x		x	X		

Fig.2 Matrix structure of CPE

With regard to co-operation with other organizations and the pertaining region which is effected by the Centre for Promotion of Entrepreneurship ,we plan for the period of 2009-2012

- Expansion of activities on regional level including the towns of Pleven, Veliko Tarnovo, Lovech, Gorna Oriahovitsa and others within the territory of the North Central Region.

- Intensification of co-operation with business. Ideas coming from enterprises(companies) will be incorporated in diploma papers and projects, in developing small businesses and finally will be employed in making a Virtual institute that will be a unit of a National Institute of the same kind.

- Strengthening co-operation with the business incubator; connection directed towards university(training), then business incubator(practical training) , business (functioning company)

- More intensive co-operation with employment organizations within the territory of North Central Region;

- Larger scale of co-operation with other centres, scientific and research units in the country and abroad based on the principle” “co-operation through competition”. In this way it will be possible to open a National Virtual Research Institute and create a network of Centres for promotion of entrepreneurship.

4. Relations and joint activity of TU-Gabrovo with companies and business associations

Co-operation between TU-Gabrovo and companies from Gabrovo region is effected through its membership in the local business Association”**Gabrovo-21**”. This Association comprises 60+ companies from the region with various subjects of business activity ranging from manufacturing to IT, services, cultural affairs and others which join efforts in the field of economy, business, science, education and retraining of specialists, promoting cultural assets, health care and sports.

In its future activity in the realm of entrepreneurship our university will rely on the

support of Association “Gabrovo – 21” which may come in the form of sponsorships, funding of research developments, providing successful entrepreneurs as visiting lecturers, rendering professional services.

Through its career Centre and the existing contacts on faculty and departmental level, TU – Gabrovo enjoys steady co-operation with a number of leading companies. This includes active research of demand for young specialists, organizing of students / employers meetings, organizing internships and signing employment contracts.

Co-operation with Association “ **High tech Business Incubator**” is of special importance to developing entrepreneurship (www.hitech-incubator.com), Co-founders of this Association and capital share holders are Municipality of Gabrovo, TU-Gabrovo and leading high tech companies.

5. Conclusions

The way to effect Lisbon concept in the field of technological renovation and economic growth is in putting by milestones such as functioning centres for promotion of entrepreneurship. They have no alternatives as a form of training or as means of connecting science, practice and market in setting them at work for materializing innovative student ideas. At present the status of Bulgarian technical institutes of higher learning allows them to make powerful impact on business and community as a whole. It is only through them that is possible to unite the three functional aspects of a present day university: training, research and entrepreneurial business.

The Entrepreneurship Centre of TU-Gabrovo aims at bringing education, research and entrepreneurship in touch with real life. There is no other evident way of resolving the issues which education, science and business are facing. Education will get rid of its present isolation from active practical implementation, financial shortages and lack of motivation among faculty and students for better quality of training and practical realization of scientific achievements. Science ,which at present is torn between higher institutes of learning, Bulgarian Academy of Sciences and business ,will find its natural settings: that of the university. Business on the other hand will be in the hands of bright young people.

In TU-Gabrovo all these prerequisites and conditions are available. Historically speaking,

the old spirit of entrepreneurship is still alive whereas our technical university has been in the business of training knowledgeable specialists for about half a century already. Third comes the fact that Gabrovo and its pertaining region has the highest number of small and medium businesses..

Implementation of such a strategic project will face quite a number of challenges and problems which are rooted in the general mindset of both academic staff and students. Since we are anticipating some complex and important change in the function of the university, in its forms of funding, restructuring of administration, its relations and interaction with other organizations and the final results of its activity ; the need for total and unconditional commitment on behalf of university's head administration, faculties and departments should go without saying. Following this change our university will transform its entity into a third generation university which will employ entrepreneurship as a natural extension of its other two main functions, those of training and research.

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