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TRAINING NEEDS FOR BUSINESS CREATION

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Abstract: Human Resources training regarding the entrepreneurship must start in universities and continue with training during all professional life. The research purpose is to detect the knowledge gaps of the undergraduate students from technical and economics Universities, in the area of business creation, during their university education. The research methodologies were: phenomenological group analysis; investigation based on questionnaires; the target groups were students in last years of study from technical and economical universities, Master students, and graduates from 20 SMEs. This research allows outlining a student profile in business creation area. The comparative results for target group as well as their different needs are presented. Final analysis is in course of implementation at university curricula level. Even the target groups are large, regarding their number (155 subjects - 35 undergraduate students, 82 Master students, 38 graduates in SMEs), the subjects belong, about 90% of them, to West Romanian university, and the results extrapolation at country level would be correct. The paper proposes the university curricula amendment with the research results for West Romanian technical universities.

1. INTRODUCTION

The SMEs development from economic point of view, have a determinative role, of innovation and research mover, of impact of society changes and so the enterprise become indissoluble connected with concepts like globalization, technical innovation, systemic integration and competitiveness growth. The quality, the performances and the competencies of human resources have an important role in these concepts. The American School of “Excellence” identified 8 features associated with companies which have excellent results (all of them, American companies). These companies were rated as excellent, based on innovation and on a set of financial indicators, compared at the level of the entire industry. The identified features, among other things, refer to the fact that the human resources are key resources and their contribution results must be valorised, and that the company is split in small operational units, where the innovation and initiative are encouraged. The human resources management offers different ways of understanding the contribution of personnel policies and practices inside the performing organizations, but all of these have a common point, namely they accept the importance of professional training, during lifetime [1, 2].

This research is based on o collaboration in the project FORCREST [3], from Leonardo da Vinci Program. At this collaboration participated 9 European countries: Spain, Germany, France, Ireland, United Kingdom, Italy, Czech Republic, Hungary and Romania. The study made by the present paper authors, refers to the training needs of undergraduate and master students, from technical and economical universities as well as to the graduates employed in small and medium enterprises, in order to acquire the knowledge regarding the process of business opportunities creation and development and also to train them for the trials they will confront with for business creation, to aware them on sustainable development implications, and to offer them the necessary competencies. All these abilities and competencies can be accomplished through professional training.

2. PURPOSE OF THE RESEARCH

Determining the lacks in technical and economical university studies undertaken by students and Bachelors of Science as reflected in the field of the business development.

This research aims to answer the following questions:

- What types of knowledge do the current university and post-university studies lack?
- What would you rank each type of knowledge on an importance scale?

What type of theoretical and/or practical knowledge should be taught during a "business development" training class?

3. RESEARCH METHODOLOGY

In order to achieve the research objectives we chose a qualitative method, namely the group phenomenological analysis and we used as a technique the non-directly centred group interview parallel with the questionnaire technique. The non-directly centred group interview technique include group interview to which the subjects have willingly participated. During the interview, the subjects are faced with real or imaginary situation and are encouraged to give their opinions, impressions and thoughts on that particular situation. The most relevant data is comprised of the opinions shared by most subjects. The questionnaire technique includes a quantitative synthesis of the subjects` answers which were later qualitatively analyzed using "the group phenomenological analysis".

3.1. Work sample

We have analyzed 155 subjects belonging to two target groups: 80 subjects are graduates, undergraduates or undertaking master of science courses with technical background – this is the technical group; 75 subjects are graduates, undergraduates or undertaking master of science courses with economical background – this in the economical group. Of the 155 subjects: 35 subjects are seniors; 82 are undertaking M. of S. courses; 38 are Bachelors of Science who work in 20 small and medium enterprises; 90% of the subjects are students or bachelors of a technical or economical university from the West of Romania which lies in the East of the European Union.

3.2. The questionnaire structure and fulfilling

In questionnaire structure were provided many chapters necessary to train an entrepreneur, and in every chapter, there are many training lines. The chapters proposed are: creation of companies: drawing up of business plan; technical – productive study; economic – financial study; innovation management; project management; environmental studies; managing skills and communication skills.

The training lines of each chapter are shown next in the questionnaire form (see table 2). The grading system in the questionnaire is the following: each subject has graded from 0 to 3, each training outline according to its own perception of the importance of knowledge that the training outline holds on its entrepreneurial development. The grading scale is: 0 - no importance for its development needs; 1 – little importance for its development needs; 2 – important for its development needs; 3 – very important for its development needs.

Table 1. The matrix: subjects – training lines

Training lines (D)	**Subjects S**				
	S_1	S_2	S_3	…	S_n
D_1	a_{11}	a_{12}	a_{13}	…	a_{1n}
D_2	a_{21}	a_{22}	a_{23}	…	a_{2n}
D_3	a_{31}	a_{32}	a_{33}	…	a_{3n}
…	…	…	…	…	
D_m	a_{m1}	a_{m2}	a_{m3}	…	a_{mn}

The mathematical model for the average calculating operation of the grades given by the subjects, necessary for the decreasing ordering of the importance of the training outline is shown in table 1 and in the following: grades $a_{ij} \varepsilon \{0,1,2,3\}$

Value $$V(D_1) = \sum_{j=1}^{n} a_{1j} \quad (1)$$

Value $$V(D_m) = \sum_{j=1}^{n} a_{mj} \quad (2)$$

Meaning value $$V(D_i) = \sum_{j=1}^{n} a_{ij} \quad (3)$$

where i=$1 \div m$ and j=$1 \div n$

Average (D_1) = $$\frac{V(D_1)}{n} = \frac{1}{n}\sum_{j=1}^{n} a_{1j} \quad (4)$$

Average (D_2) = $$\frac{V(D_2)}{n} = \frac{1}{n}\sum_{j=1}^{n} a_{2j} \quad (5)$$

Average (D_m) = $$\frac{V(D_m)}{n} = \frac{1}{n}\sum_{j=1}^{n} a_{mj} \quad (6)$$

Meaning Average (D_i) = $$\frac{V(D_i)}{n} = \frac{1}{n}\sum_{j=1}^{n} a_{ij} \quad (7)$$

where i= 1,2,…m

4. ANALYSIS OF THE RESEARCH RESULTS

4.1. Drawing up of the business plan

A business plan is basic both in starting a new business and in developing an already existent one. A business plan can give a first real image on the perspective of the business; in this way you can reduce the risk of starting projects which are not viable. After a business plan has been conceived, it must answer the following questions:

- To which social need addresses my business?
- Which is the legal environment of my business?
- How will the business be coordinated and who will be the people involved in it?
- What resources are needed and from where can they be obtained?
- Which are the necessary steps in a long term development?
- Which are the strong and weak points of the business?
- Which are the threats and opportunities I need to take into consideration when starting a business?
- Is there a market for my product/service?
- Which is the competition I need to take into consideration for my business?
- How many finances will I need?
- Is my business viable? And if it is, what will be its value and how much profit am I expected to make?

After writing a business plan you can figure out if a business is worth being started/developed or not, without involving too much financial resources. When writing the plan is necessary that real (or as real as possible) data is used, in order to give true and concluding answers.

Table 2. The grades averages given to "Drawing up of the business plan "section

Training lines		Average (D_i)	
		Background	
		Technical	Economical
Drawing up of the business plan	Business idea	1.937	2.214
	Human capital	1.500	1.643
	Market and competition	2.188	2.067
	Marketing / Distribution	2.250	2.067
	Opportunities and risks	1.688	1.667
	Business management	1.938	2.000
	Economic and financial viability	1.313	1.200
	Legal frame of the company	1.333	1.133

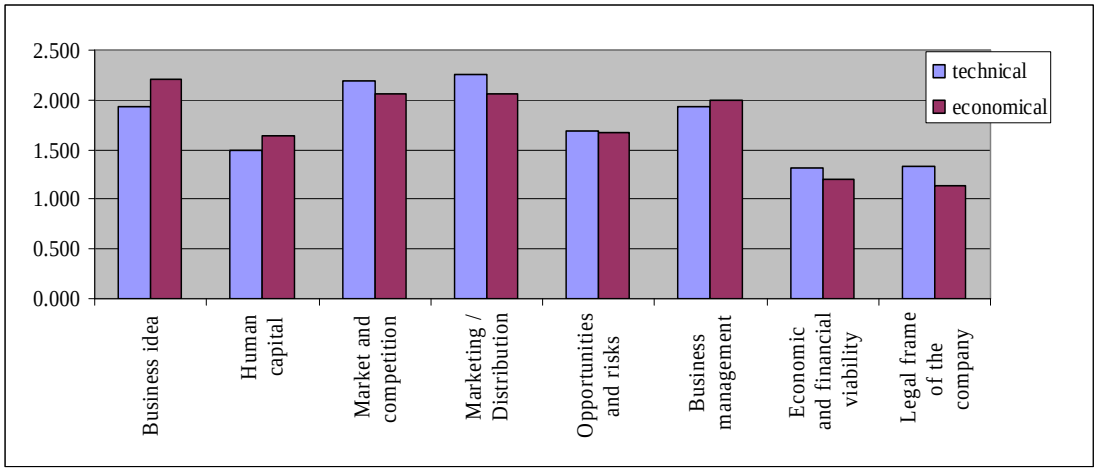

Figure 1. Graphic representation of values from table 2

Training need in "Drawing up of the business plan" centered on "Business Idea" is understood by the subjects as a necessity to acquire the knowledge for the process of business opportunity creation and development. To find a right business idea is difficult and this is the reason why both subjects with technical background and subjects with economical background observed the informational gap they had after graduating university, have given an average of 1.937 respectively 2.214. (From the research results the conclusion that the grades around value 2.00 represent the maximal value of training need in a particular direction.). The business Plan Elaboration in subjects meaning is mostly centered on:

- "Market and competition" problems marked with values of 2.188 (for graduates with technical background), respectively 2.067 (for graduates with economical background);
- "Marketing/distribution" problems marked with values of 2.250, (for graduates with technical background) respectively 2.067 (for graduates with economical background);
- "Business management" problems marked with values around grade 2.00.

The subjects remarked the importance of defining correctly the strategic marketing objectives, of knowing the marketing mix policies, of product, price, distribution, communication policies which have not represented an important item in their university education. It is worthy to notice that, even if in this research are involved 38 graduates-employees from small and medium enterprises and who have met during their practice this kind of problems (which, theoretically they haven't studied), consider that is absolutely necessary to have practical and theoretical training in marketing and business management areas [2, 3].

It is worthy to notice that, both target groups (technical and economical) confer a smaller importance to problems concerning the economical and financial viability as well as to the legal frame of the company, because they consider that a good business plan , well-thought-out, will have financial viability and that the legal frame is established by authorities. As a consequence, their training needs in these fields are not on top, being quoted with values of 1.133 - 1.333. The comments are based on averages presented in table 2 and graphic representation of values figure 1.

4.2. Technical - productive study

Table 3. The grades averages given to "Technical-productive study "section

Training lines		Average (D_i) Background	
		Technical	Economical
Technical-productive study	Production system	0.688	1.357
	Production strategies	1.563	1.533
	Distribution plant	1.375	1.071
	Production and know-how	1.875	1.600
	Operations plan: logistics, quality.	1.750	1.733
	Prototyping	0.688	0.667
	Outsourcing	0.938	0.800

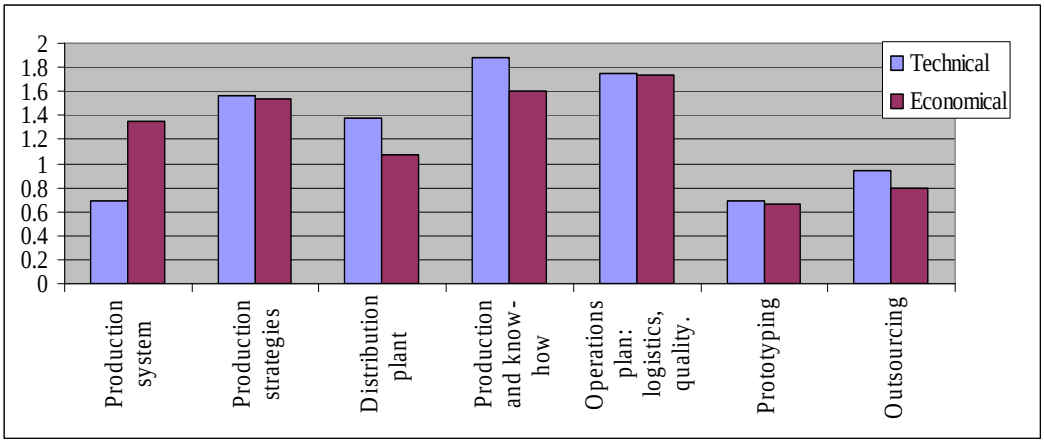

Figure 2. Graphic representation of values from table 3

This study [3] is generally used for creating/analyzing productive businesses and for identifying the main elements of operational management and of the way the productive part of an economical division operates. Through this study, the following will be identified:

- The production system used according to the market requirements and the type of product taken into consideration?
- The production strategies used, considering the organization's internal and external environment?
- Which technologies are used, if inventions, innovations, special prototypes or a special know how are used?
- How is the organization's product/service distributed?
- Is outsourcing used?
- Which is the logistic and the quality system used by the organization?
- Are special environments or quality certifications needed?

After this study has been written it can be identified which production system is the best for the company, which are the minimal conditions for functioning and which

qualifications will the people working in the system need. It is worthy to notice that regarding the "Technical – productive study" item the questioned subjects with technical background consider that they have minimal needs of technical training (0.688), but consider the "production and know-how" as an important item (1.875). The questioned subjects with economical background need a minimal technical training. Both target groups consider that they have to be better informed in order to conceive the operational plans (logistics plan, quality plans etc.), concepts which are missing from the university curricula. The investigated subjects have not considered as important the problems concerning "prototyping" and "outsourcing", and they did not felt the need for supplementary training [2, 3]. The comments are based on averages presented in table 3 and graphic representation of values figure 2.

4.3. Economic financial study

Table 4. The grades averages given to "Economic-financial study "section

Training lines		Average (D_i)	
		Background	
		Technical	Economical
Economic-financial study	Indicators of business viability	2.187	1.286
	Project scheduling	2.187	1.133
	Economic quantification	1.875	1.467
	Cash flows	1.563	1.667
	Aids/Subventions and support instruments	1.000	0.933

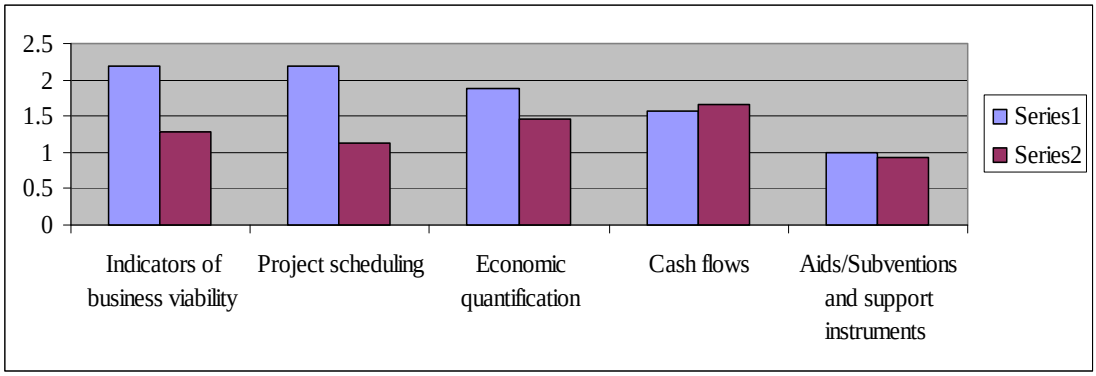

Figure 3. Graphic representation of values from table 4

This study is necessary to calculate the business indicators, namely: profitability, solvability, return on investment, net present value, break even point, liquidity current ratio, acid test liquidity ratio, equity ratio, inventory, etc. These indicators are used to show the financial viability of a business, the necessary sums of money for its functioning and to give a date as to when the initial investment will be recovered. A really valuable tool in this plan is the business cash flow, which shows the reality of the firm's in and outs in a certain period of time. Depending on the deficit or surplus of cash you can calculate the need for capital and the time period that this need will be present. Through a real estimation of financial needs a better management is achieved in this field [2, 3].

At the "Economic-financial study" elaboration, the group of graduates with technical background feels the major need of training in this direction. It is worthy to notice that the given grades they exceed the value 2.00 for the "indicators of business viability" and "project scheduling", and value 1.875 for "economic quantification". This demonstrates a large gap in technical university curricula, which emphasizes the technical execution of

product, on product conceiving, without corroborating with economic-financial part. The target group of graduates with economical background is well informed about the "economic-financial study", and therefore, their needs are moderated.

The financial results prevision and the business's financial needs are absolutely necessary to understand "the financial language" which is needed for a better internal communication, knowing the company's financial situation, for understanding the factors which influence the profit and cash-flow, the organization financial structure. In this way the subjects will have the possibility to observe the way in which operational decisions influence the financial results. The comments are based on averages presented in table 4 and graphic representation of values figure 3.

4.4. Innovation Management

Innovation management is very important for an existing business as well as for one that is just about to be created. It is important to say that by using an innovative management you manage to distance yourself from many of your market competitors. With the globalization, innovative marketing can really make the difference between two businesses. In this field the general innovation strategy as well as the added value this brings is studied. The elements regarding knowledge management as well as technological evolution prevision are also studied. This type of evolution is very dynamic; the life span of a product reduced a lot during the last 10 years. From all these, you can establish the main elements of research-development-innovation which will have to be taken into consideration by the firm with the launching of a new service/product, or with launching the actual business. This type of knowledge is essential for identifying certain specific managerial instruments which are used in innovation management and for applying this at a much larger scale than the present one [2, 3].

Table 5. The grades averages given to "Innovation Management "section

Training lines		Average (D_i) Background	
		Technical	Economical
Innovation Management	Knowledge management	1.000	1.133
	Basic concepts of innovation	1.375	1.267
	Business strategy and technology strategy	1.563	1.400
	Data mining	1.063	0.733
	Technology forecast	1.133	0.714
	Technology alertness	1.125	1.000
	R&D: Research classes, R&D steps.	1.188	1.000
	Tools for the innovation management	1.200	1.077

It is worthy to notice that both target groups do not give a special importance to their training needs in the "innovation management" area, but only on "business strategy and technology strategy" sequence, where the group of graduates with technical background give the average of 1.563 and the group of graduates with economical background give the average of 1.40. They are moderate interested in "basic concepts of innovation" but we think they have not fully understand the link between the innovation benefits, importance and the business success. They did not understand that innovation is a comprehensive approach of the way of doing business. From the study of university curricula in technical area for the Universities from West of Romania it has been remarked the absence of a

discipline which should include at least a chapter about innovation management, about research management, hence the lack of interest of subjects (students, graduates). The comments are based on averages presented in table 5 and graphic representation of values figure 4 [3].

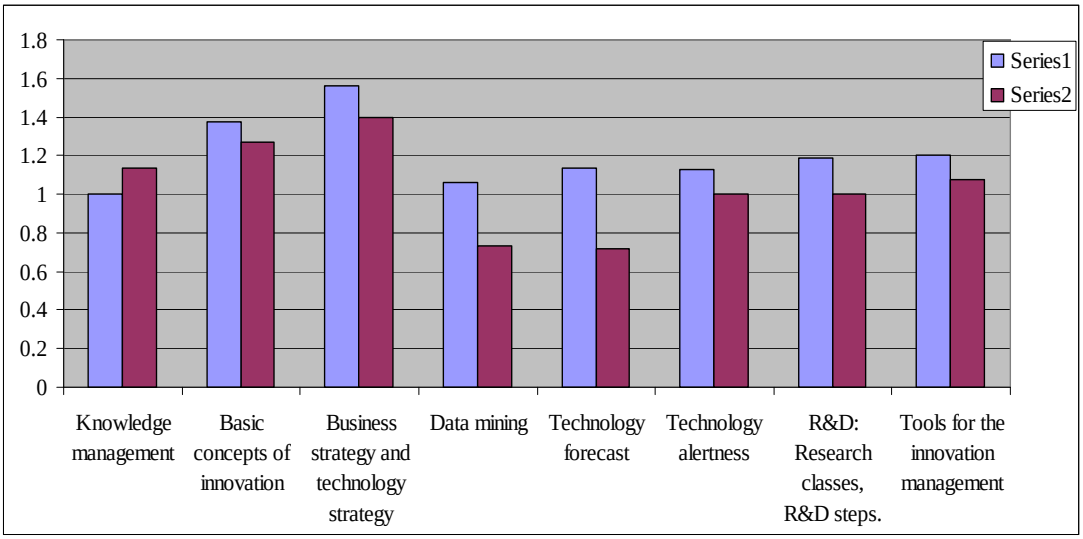

Figure 4. Graphic representation of values from table 5

4.5. Project Management

Project management is a leadership tool that is indispensable in modern day times. Leading from the base concepts of project management (measurable object, budgets, deadlines, activities, involved resources, utilized informational resources) the following are studied [2, 3]:

- Team work, knowing that a project is implemented by a team;
- Notions of organizational culture, when dealing with a team made up of different sexes, religions, races and social conditions;
- Cost calculation elements as well as financial management, knowing that a project has a budget which must be respected;
- Communication skills, knowing full well that team work requires very good communication skills as well as strict ways of reporting the project evolution;
- Managerial control used to study the objectives and their management;
- Elements regarding computer programs used to predict future project evolution, taking into consideration the project parameters;
- Quality elements used in project development.

All the above explained elements will lead to a better understanding of the project management involved in managing a new business or a business about to be developed.

The target group of graduates with technical background, used with the system of projects, considers that projects management is important and gives it a grade of 1.938 and demonstrate a training need in this sequence, as well as in “planning tools and project management: web, software etc, graded with 1.800. It is worthy to notice a gap in managerial training of future students [2, 3].

The target group of graduates with economical background does not manifest major training needs for these sequences, because from the phenomenological group analysis result that in their professional education they have chapters which cover these needs. Both target groups (ones graded with 1.867, others with 1.733) have understood the human resources’ importance as a business resource of a company, and the university education does not cover this need enough as the real life requires. From the same

reasons both target groups feel the need to train in "communication management"- another gap of our university curricula [2, 3].

Table 6. The grades averages given to "Projects Management "section

Training lines		Average (D_i) Background	
		Technical	Economical
Projects Management	Concept of "Project Management (PM)"	1.938	1.600
	Planning tools and projects management: WBS, software (Project Manager), etc.	1.800	1.500
	Teams organization	1.500	1.400
	Project culture	1.313	1.267
	Short-term planning	1.500	1.400
	Objectives management	1.500	1.400
	Cost engineering	1.438	1.333
	Financial management	1.267	1.429
	Human resources and PM	1.867	1.733
	Security management and health at work	1.313	1.133
	Contracting system	1.188	1.000
	Communication management	1.625	1.867
	Control	1.250	1.533
	Total quality of the project	1.267	1.286

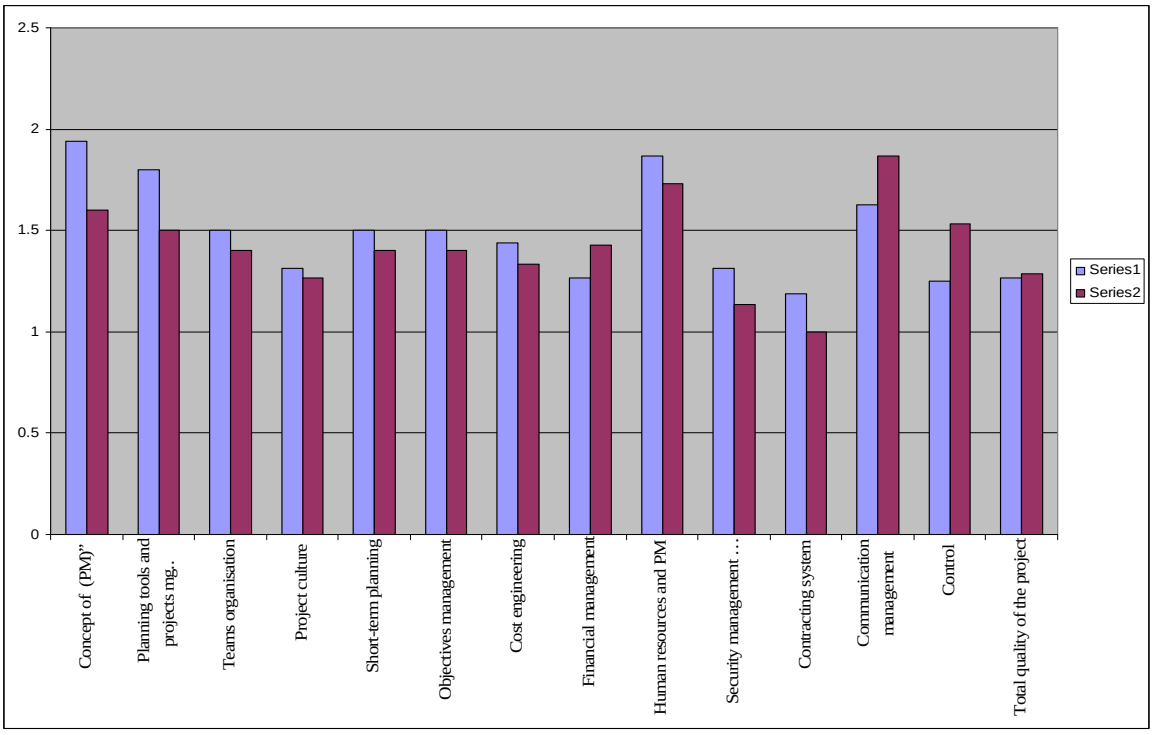

Figure 5. Graphic representation of values from table 6

At the "project culture", "team organization", "short-term planning" and "management objectives" sequences, the training needs of both groups were moderated, having averages between 1.22-1.50. This thing raised a query to the paper's authors and from phenomenological group analysis resulted that the students have a culture problem. They all agreed, at declarative level, that working in a team is very important, but the spirit and

our cultural formation must be done individually. From the subjects' attitude also results that from the same cultural reasons, we are disposed to make medium and long term scheduling, but on short term we generally take fast, risky and motivating decisions, decisions taken for the moment.

At the training lines of "cost engineering" and "financial management", the training needs of the group of graduates with economical background are lower and motivated by their professional education. At the group of graduates with technical background who gave the average 1.438, respectively 1.267, the proposed average it is motivated through their training needs in economical area which must not be at the cost engineering level, respectively financial management, which from the subjects' point of view belong to their collaborators – the economists.

"Security management and health at work" was motivated for the engineers from the construction field (10 people) who have given the maximum level of importance to work security and health, in building yards work. Their attitude resides from their professional education, the labour protection on the building yards being an important item in their annual practice stage, in every university year. The other persons from the group, depending on their working place or their peculiar technical education, have been placed on second places, concerning training needs for the security and health of work. The "Contracting system" did not required major training needs for any target group, even if these are not university disciplines, which educate the students in this field. The subjects consider that these aspects will be learnt in practice. The "Control" and "Total quality of the project" training lines were not especially required by the subjects from the two groups, because from the phenomenological group analysis resulted:

- Specialized persons are required for this type of activities and the subjects must have only a few basic notions, which in fact they have already received during the university courses.
- We have to admit that control and total quality of the project are not on the first positions in our university education.

The comments are based on averages presented in table 6 and graphic representation of values figure 5 [2, 3].

4.6. Environmental studies

The durable development complies with the present's requests without compromising the next generations' possibilities of satisfying their own needs (The United Nations Commission for Environment and Development). This concept has as central point the economical development achievement, to which we add the technological development, under the conditions of environment preservation for the present and future societies, even if it shows a contradiction in the framework of durable development between the growing needs of people, needs which demand a maximal use of natural resources and environmental quality [2, 3].

The essence of the development sample, according to many authors, can be found at the crossroad of three domains: economical, environmental and social, under the name of the "3P" (i.e. the three responsibilities of sustainability) PROFIT – PEOPLE – PLANET. From data analysis and processing of the questionnaires' answers of the 155 subjects, concerning the training needs in the sustainability field, it can be observed that both target groups have no major needs of training. The grades average lower than 1 (0.733 respectively 0.929) given by the subjects lead us to this conclusion [2, 3].

Table 7. The grades averages given to "Environmental studies "section

Training lines		Average (D_i) Background	
		Technical	Economical
Environmental studies	Basic concepts about sustainability	0.733	0.929
	Models of sustainable growth	0.400	0.786
	Business ethics	1.267	1.231
	Planning of environmental management	1.000	0.929
	Environmental impact	0.733	0.786
	Competition and sustainable development	0.800	0.714
	Profit and sustainable development	1.400	1.357
	Control of the environmental management	1.133	1.216
	Environmental policy of the EU	1.067	1.357
	Economic setting and business repercussions on the environment	1.333	1.216
	Strategic approach of the sustainable development	1.000	1.000

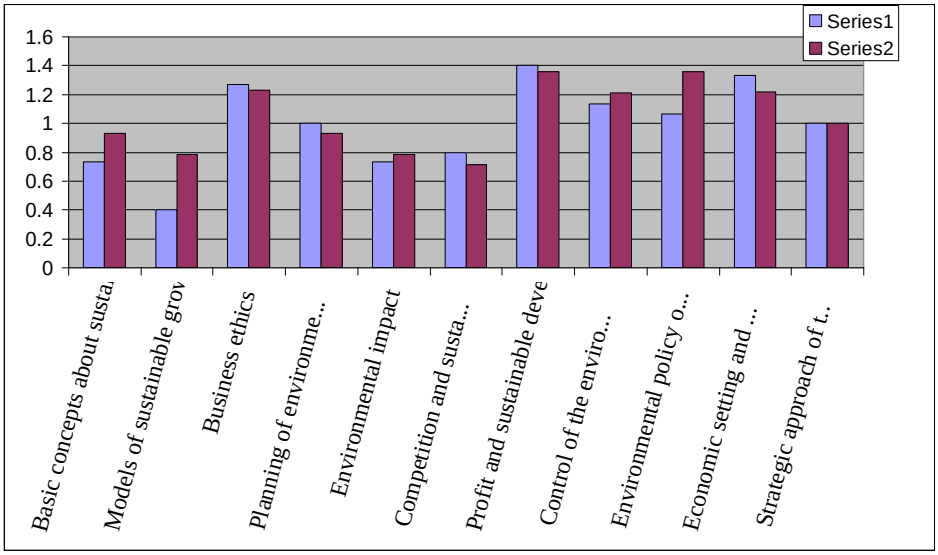

Figure 6. Graphic representation of values from table 7

Knowing the real situation, namely:

- The sustainability concept is a modern concept, relatively new, with which is not operated at global level;
- University curricula, at both technical and economical line does not have disciplines which refer exactly to the sustainability concept;
- Only in technical universities at "Environmental Engineering" the problems linked with to the environment engineering and protection of durable development are studied.

Through the phenomenological group analysis resulted the following: the subjects were not used with the sustainability concept, explaining it, from the semantically point of view as the business, enterprise's "self supporting"; subjects have not understood the relation between the economical, social and environmental preservation responsibility [3].

These are the reasons why they did not considered useful a professional training in this field, absolutely necessary for the business success. It is worthy to notice that the "control of the environmental management" and "Economic setting and business repercussions on the environment" training lines were the most agreed from chapter "Environmental studies", because they felt the need of specific information. The comments are based on averages presented in table 7 and graphic representation of values figure 6.

4.7. Managing skills and communication skills

From data analysis and interpretation (table 8, figure 7) it can be observed the training need of target groups with technical background and economical background, in the "managing skills" sequence, where the averages are higher, many of them around the value 2, which demonstrate that: the young people aspiration to the success model of managerial leader type, professional acknowledgement, international opening [2, 3].The training leadership line is scored with average 2.125 - 2.357.

Table 8. The grades averages given to "Management skills and Communication skills "section

Training lines		Average (D_i) Background	
		Technical	Economical
Managing skills	Leadership	2.125	2.357
	Team management and motivation	2.000	2.000
	Team working	2.188	2.133
	Negotiations and conflict resolution	1.688	1.600
	Change management	1.438	1.200
	Time management	1.375	1.467
	Motivation techniques	1.438	1.400
	Communication in the company	2.188	2.133
	Emotional intelligence	0.688	0.733
	Strategic and operation planning	1.438	1.467
Communication skills	Communication skills	1.938	1.800
	Networking	1.600	1.643

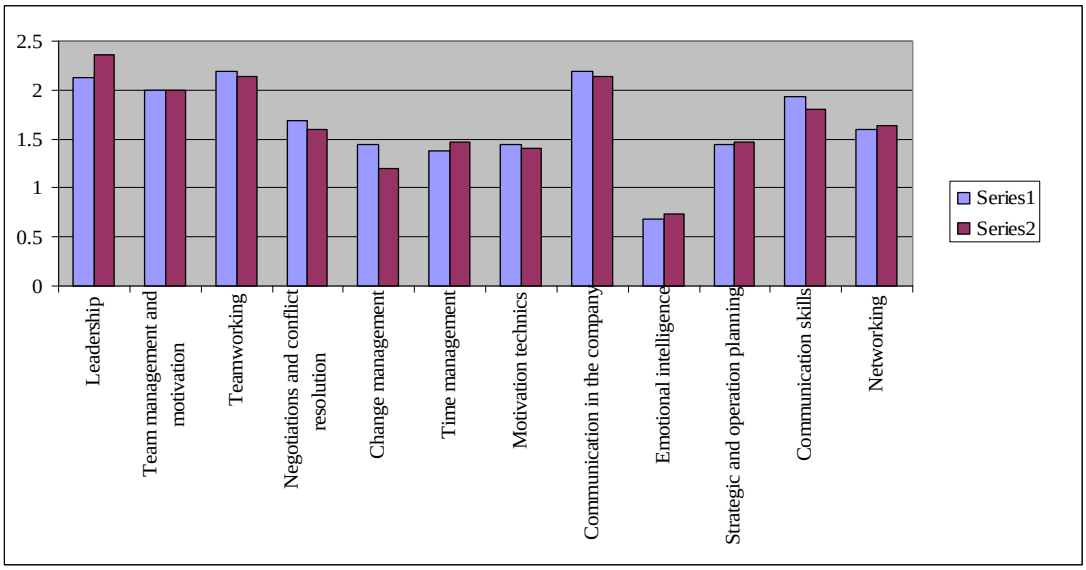

Figure 7. Graphic representation of values from table 8

Based on the above figure we can conclude that:

- They also distinguish between the success given by a graduation diploma and what a supplementary training in "managing skills " field can give;
- They are motivated to choose a particular career and so they become aware of the necessity to collaborate, to co-interest, to seduce and convince the members of the team they belong to and who they want to lead them in the future to lead them. They agree that the "team management and motivation, team working" training lines for which they give averages between 2.0-2.18;
- Being aware of the importance of the informational circuit at company level , they feel that the needs to train in the "communication in the company" sequence (scored with 2.188-2.133)and " communication skills" (1.938-1.800) are high;
- The capacity to work in network, work abilities development, maximization of network potentials , the cognition of individual values and team building, motivation techniques, strategic thinking development, are topics considered by the target groups as necessary for their training.
- The emotional intelligence as a capacity of personal administration and efficient identification of own emotions, compared to personal goals, career, education are well covered by the initial instruction of subjects during the educational training process.

From the university curricula analysis for technical field results a major gap in managerial abilities training at students and graduates level. From here and the important dominant mark that subjects of the two target groups allot at this "managing skills and communication skills" chapter. The comments are based on averages presented in table 8 and graphic representation of values figure 7 [2, 3].

5. CONCLUSIONS

There are some conclusions that can be drawn from this study about the development needs for the achievement of entrepreneurial and business development skills, for the two target groups, the technical and economical groups. In order to synthesize the result, we have shown the development needs particular to each target group, as structured in specific sections and training outlines [2]. Thus we can distinguish:

a) The number of development needs for the two target groups:

- The technical target group has 28 development needs of which:
  - 16 graded with an average value of 2.0, i.e. very important in the perception of the subjects;
  - 12 graded as important with average values of 1.5 up to 1.75;
- The economical target group has 21 development needs of which:
  - 10 graded as very important with an average value of 2.0;
  - 11 graded as important with average values 1.5 up to 1.75;

b) Types of developments needs for the achievement of entrepreneurial skills:

- Entrepreneurial skills imply innovation, taking chances, responsibility, turning an idea into a project and that project into reality. Entrepreneurial spirit is essential for society's forth going [3].
- The subjects have shown to be aware of the need of such skills and have pointed out that they have development needs particularly in the following fields:
  - Drawing up and development of business plan;
  - Project management;
  - Managing skills and communication skills.
- This shows a lack of minimal entrepreneurial skills in the structure of university curricula.
- Thus, there are neglected problems such as the following:
  - Business creation, discovering opportunities;
  - Business planning through combining theoretical and practical knowledge;

- Linking operational and strategic plans;
- Organization strategy and human resources;
- Communications skills;
- Team work, team organization and leadership;
- Work schedule etc.

- Due to its basic training, the technical target group feels the need to achieve high-graded financial skills – e.g. the economic quantification of a business, since there no such disciplines in the university training.
- Oddly, either target groups have expressed the need for innovation, sustainability and environmental protection knowledge. At a first glace one may think that this is due to the sound training in these fields. However the group analysis shows that both target groups lack basic knowledge in this field, therefore ignoring these aspects.
- It is important that the university curricula, for both technical and economical fields should include such disciplines as the importance of innovation, its returns in the race against competition, the need for environment preservation etc.
- Both target groups have expressed their desire that the training system should equally contain theoretical and practical knowledge.

6. PROPOSITIONS

As a results of research conclusions, presented in this paper, and because the number of subjects involved was largish (155 subjects from all technical and economical Universities located in West and south west of Romania), the authors of paper propose the following:

- In case of technical universities, where the curricula has a number of approximate 3500 hours during 4 years of license studies – to be introduced an “entrepreneurial module”, which means a number of disciplines large enough to enable the future graduates to achieve the necessary competencies for business creation and management. We propose a number of 6-7 disciplines, with a number of 42-56 hours/discipline (a proportion of 10% from the total number of hours). The knowledge, in this module, will be theoretical and practical. In this “entrepreneurial module” can be introduced disciplines like: economics, finance, strategic and operational management, innovation management, marketing, environment and sustainability problems, human resources, communication, etc.
- In case of post graduate studies, master studies, it is necessary to be created particular specializations, oriented to training of entrepreneurial competencies, corresponding with the training needs resulted from this study.

The present results along with authors’ propositions were sent to the universities present in the research program.

7. REFERENCES

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