

## **SIMULATED ORGANIZATIONS AS A MODERN MEANS OF STUDENT PRACTICE**

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### **ABSTRACT**

*The current economic situation, determined by the new economic and financial context, namely the post crisis period we are facing, the acceleration of globalization, internationalization of companies, increased market interdependence places most economic organizations in a context of "economic war". Universities make no exception. Faced with such a situation, the organizations that will come out victorious will be those whose management demonstrates imagination and creativity to find better suited progress solutions aimed at increasing the organization's competitiveness. It is the opinion of the authors of this paper that student practice for economic universities' students should take into consideration a new method, which is practice through simulated organizations, since simulated organizations offer their participants training in: the use of computers; human resources management; accountancy; marketing and sales; entrepreneurship. It is our belief that such a strategic move could ensure the competitive advantage of the universities who undertake it.*

**KEYWORDS:** *higher education, competitive advantage, differentiation, simulated organization, student practice.*

**JEL CLASSIFICATION:** *M1, A23, P46.*

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### **1. INTRODUCTION**

The current economic situation, determined by the new economic and financial context, namely the post crisis period we are facing, the acceleration of globalization, internationalization of companies, increased market interdependence places most economic organizations in a context of "economic war". Faced with such a situation, we have to abstain from being fatalistic, from remaining passive and from admitting that we're crossing a hopeless economic time. From this difficult but stimulating situation, the organizations that will come out victorious will be those whose management demonstrates imagination and creativity to find better suited progress solutions with high economic efficiency, solutions to increase the organization's competitiveness. Among these solutions, those regarding the growth of performance through modern management organization should have the highest priority. (Deac et al., 2016)

According to Luban and Hîncu (2009) "a simulation model could be a useful and versatile tool to gain insight into the operation of systems".

A simulated organization (also known as a practice or virtual organization) is a virtual company that works like a real business, with real business procedures, products or services. A simulated organization resembles a real company in its form, organization and function. In order for the simulated organization to emulate real market conditions, it needs to trade, both with other

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simulated organizations and even real ones (even though in this case the trades would be fictitious), following commercial business procedures in what has come to become a simulated organizations **worldwide** economic environment (<http://www.penworldwide.org/practiceenterprise.html>).

A simulated organization is set up by trainees (which can be high school pupils, university students or even master's students), with the assistance of a facilitator or trainer, with the purpose to undertake various commercial activities (which can range from simple trading to more complex activities such as production of different goods or services). It provides trainees with hands-on business skills and enhances their knowledge and experience of business practices.

Simulated organizations foster entrepreneurial attitudes and skills among young people and also among adults (unemployed people, employees, adults with disabilities and so on).

While there is no actual transfer of goods or money between a simulated organization and other organizations, simulated or real, real-like transactions do take place: orders are made, invoices issued and financial records maintained - creditors, debtors, stock holdings and so on. This makes the simulated organization the perfect environment for a student or pupil to study and understand real business processes.

Simulated organizations usually offer their participants training in:

- the use of computers – most modern simulated organizations are software based and you need to be computer literate to be able to participate;
- human resources management – team management is, unlike the commercial aspect, a very tangible side of the simulated enterprises; students must learn to elect their leaders, work together and function as a team, which are very useful skills for their future career, whichever it may be;
- accountancy – every simulated organization is required to keep financial records of its trades, creditors, debtors and so on; thus, students involved learn basic accounting notions;
- marketing and sales – sales in the case of simulated organizations work pretty much the same as in any regular company – you need to present your products in such a way that clients will want to buy them; as such, students usually learn to create websites for their products, to present them in an appealing manner and to send offers to potential clients;
- entrepreneurship – students start their own virtual businesses, which means they need to learn the steps they need to take in order to establish a business, from thinking on the concept of their business and defining their market to finding resources to set up their company and operate it.

Simulated organizations train students' ability to take initiative, self-reliance. They also deliver knowledge on how to establish and run a company. Students learn in a simulated organization how to work as a team, to take on responsibility, to develop self-initiative and to improve their soft, professional and technical skills (Tunstall & Lynch, 2010).

Trading with other simulated organizations is an essential part of the concept. Simulated organizations trade with each other in a closed economy according to strict commercial principles. The global simulated organizations network consists of thousands of entities. Access to these can be gained through the use of online platforms such as roct.ro.

## **2. UNIVERSITY STUDENT PRACTICE**

In Romania, student specialty practice is conducted according to the National Education Law 1/2011, 258/2007 Student Practice Law, 3955/2008 Directive for the approval of the general framework for conducting practice internships.

Specialty practice is a compulsory discipline for The Bucharest University of Economic Studies students; it is usually conducted in the second or the third year of study as a three weeks compact internship ending in a practice report (<http://www.management.ase.ro/practica>). It should be

undertaken in an organization that deals with production, commerce or services, in a bank or a research institute, or even in a public administration entity. The Bucharest University of Economic Studies also offers the students the possibility to undertake their practice internship in one of its 15 research centers (constructed around its faculties) or in its business simulator departments (which is mainly preferred by master's students).

Even though at the moment student practice is covered by a number of projects and partnerships with the business environment, it is the opinion of the authors of this paper that the Management faculty of The Bucharest University should also take into consideration the possibilities offered by simulated organizations.

For now, simulated organizations have been a subject for projects undertaken by academic representatives in Romania, and only a limited number of students have had access to them.

### 3. SIMULATED ORGANIZATION RELATED PROJECTS IN ROMANIA

In Romania, simulated organization practice has become quite popular in the last couple of years, and a lot of projects have been funded by the European Union to allow students to participate in simulated organizations internships. To name just a couple of them:

1. SIMPRACT – Transition from school to active life – a project for which CNIPMMR brought together 8 prestigious Romanian universities: The Bucharest University of Economic Studies; „Ovidius” University of Constanța; „Dunărea de Jos” University of Galați; Craiova University; „Lucian Blaga” University of Sibiu; „Gheorghe Asachi” Technical University of Iași; „Valahia” University of Târgoviște; „Constantin Brâncuși” University of Târgu-Jiu.

This project had a target group of no less than 7.000 students, who would receive professional counseling; 2.250 of them would participate in simulated organizations; 500 would perform internships in real organizations. In total, the project aimed to establish at least 25 simulated organizations, according to ROCT methodology. By the end of it, they were able to set-up 27 simulated organizations, out of which 2 were set-up by The Bucharest University of Economic Studies (S.O. BEST IT&C and S.O. ALPHA CONSULTING). All the SIMPRACT simulated organizations are present on the online platform [www.roct.ro](http://www.roct.ro) (the activity of the simulated enterprises in Romania is performed via the platform ROCT-Romanian Coordination Centre of Training Firms. ROCT operates as a department of the National Centre for Development of Vocational and Technical Education).

SIMPRACT was cofinanced by the European Social Fund through the POSDRU 2007-2013 programme and had a total budget of 17.384.209, 71 RON. (<http://www.simpract.ro/>)

2. Over 4.200 students and master's students in economic faculties did internships in a simulated organizations network set up with European funds within the “Acces real la piața muncii prin întreprinderea simulate” project, POSDRU 90/2.1/S/63442. This project was undertaken between 2010 and 2013 and had a total budget of 11.211.111, 80 RON, out of which 10.649.620 RON came through European funding. (<http://www.fcaa.uaic.ro/ro/main/page/284>)

The project team was made of „Ovidius” University of Constanța (as beneficiary); The Bucharest University of Economic Studies; The „Alexandru Ioan Cuza” University of Iași; The West University of Timișoara; Structural Consulting TM Group.

As objectives, the project aimed at:

- Instructing and certifying 24 real organizations employees as tutors and trainers for students and master's students involved in simulated organizations;
- Elaborating and implementing a package of support tools for the counseling and professional orientation of 384 master's students;
- Practical training of 3.840 students plus the 384 master's students in 12 simulated organizations that activate in tourism, banking and commerce;

- Creating an integrated platform for business simulation and e-learning.

We will talk next a bit more in depth about a third project which one of the authors of this paper was involved in as a trainer.

#### **4. PERSONAL EXPERIENCE WITH SIMULATED ORGANIZATIONS**

One of the authors of this paper has been recently involved in a project destined to teach the students of both Technical University of Civil Engineering in Bucharest and The Bucharest University of Economic Studies what a real organization looks and acts like. The means to do that was through the simulated organizations network in Romania - ROCT.

The self-declared overall objective of the project POSDRU/161/2.1/G/141733 was to „develop the working skills of students in technical and economic education through participation in innovative activities that facilitate the transition from school to active life by implementing interactive learning methods like simulated construction and building materials enterprises in with a view to raising the labor market insertion and their employability” (Simion-Melinte, Giurgiu & Abrudan, 2015).

The POSDRU/161/2.1/G/141733 project, called „Facilitation of the transition of students from school to active life through interactive methods such as simulated organizations activating in construction and production of construction materials fields” - CONSIMAT, was developed in a partnership comprising The Association of Building Materials Producers in Romania; The Bucharest University of Economic Studies; The Technical University of Civil Engineering Bucharest; a building research institute.

The first three simulated organizations activated within the CONSIMAT project were:

- S.O. Betonstahl Konstrukt Ltd.;
- S.O. Inter ASTC Ltd.;
- S.O. Macons Ltd.

Mihai Vrîncuț was the coordinator and trainer of S.O. Betonstahl Konstrukt Ltd. The group of students was made of around 20 students from both The Bucharest University of Economic Studies and The Technical University of Civil Engineering Bucharest. The S.O. was coordinated by Mihai Vrîncuț from November 2014 to February 2015. It still exists and is still active on ROCT’s platform for simulated organizations.

##### **4.1 Activity sequence**

To detail a bit the activities the author was involved in along with the students he trained, we’re going to consider one of the simulated organizations I trained:

Betonstahl Konstrukt Ltd. was established in November 2014. As a coordinator, it was my job to first oversee the collection of information related to starting a business from the authorized institutions, and also the debates in my group of students based on the collected information; to coordinate the name reservation request for the simulated organization; to familiarize and help students fill in the necessary paperwork (which included the business entity registration, the request for a tax identification number, different permits, account creation form, signature specimens from the management of the business and so on); to send the scanned documents to ROCT; to deliver the documents issued by ROCT; to create a new account on the website [www.roct.ro](http://www.roct.ro) for the Betonstahl Konstrukt simulated organization; to help students establish a company logo.

The challenge was to create a team out of the students of The Bucharest University of Economic Studies and The Technical University of Civil Engineering Bucharest, who had just met. They needed to elect their leaders and in order to do that, they had little time to get to know each other. The result of the first meeting with the students can be seen in Figure 1.

Contul Meu | Iesire din cont

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firme de exercițiu | întreprinderi simulate | parteneri | galerie | contact | blog

Contul Meu | Produse / Servicii | Documente | Tranzactii | Schimbare Parola | Iesire din cont.

### Contul Meu

#### Universitatea Tehnică de Construcții București

Bd. Lacul Tei nr. 122 - 124, București, jud. Bucuresti

#### Detalii Companie

C.I.F: RO1210008004 Nr. Reg. Com: J40/377/15.12.2014  
Serie certificat A-IS Numar certificat 1408004  
inreg.: inreg.:  
Domeniu Tip activitate: Servicii  
Activitate:  
CAEN:  
4120 - Lucrari de constructii a cladirilor rezidentiale si nerezidentiale  
4339 - Alte lucrari de finisare

#### Date Contact

Telefon: 0213211236 Fax: 0213211236  
E-mail: bskonstrukt@gmail.com Website: <http://www.consimat.org.ro>

Comunicari 2016/2017

Situatie statistica

Marca de calitate

Competitia Business Plan

POSDRU/57/1.3/S/33440

Octombrie 2016

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10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

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**Figure 1. Screen capture of the S.O. Betonstahl Konstrukt main page on roct.ro**

*Source:* captured from [www.roct.ro](http://www.roct.ro) (2016)

In December 2014 S.O. Betonstahl Konstrukt Ltd. undertook the following activities:

- We analyzed the results we obtained in November;
- We finalized the company logo;
- We organized hiring interviews for all the members, in order for the students to get accustomed to both conducting an interview as well as participating in one;
- We created an offer of products and services which we then uploaded on our account on [www.roct.ro](http://www.roct.ro);
- We also started working on a personalized offer which we would send via e-mail to our potential business partners;
- We started working on an organizational chart, which included all the positions needed to properly conduct the business activity, taking into account the offer of products and services that we settled on;
- We elaborated documents necessary for the human resources department, which included an organizational chart, a classification of positions and a payroll;
- We conducted transactions with other simulated organizations available on the ROCT platform, and filled in all the documents related to that activity (receipts, payment orders and so on);
- We administered our ROCT account and created a company website using a free provider (<http://bsk.webwiz.ro/>).

Part of the product list uploaded on [www.roct.ro](http://www.roct.ro) can be seen in Figure 2.

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## Produse / Servicii

[Adauga Produs Nou](#)

Imagine	Produs / Serviciu	Pret
	<b>Glet de finisare</b>	35 lei/mp LEI
	<b>Tencuire pereti</b>	45 lei/mp LEI
	<b>Placare pereti cu gips-carton</b>	50 lei/mp LEI
	<b>Realizare pereti de compartimentare din gips-carton</b>	75 lei/mp LEI
	<b>Montaj echipamente electrice</b> Prize, intrerupatoare, corpuri de iluminat etc.	50 lei/buc LEI
	<b>Preparare + turnare beton</b>	300 lei/mc LEI
	<b>Realizare cofraj + decofrare</b>	50 lei/mp LEI
	<b>Fasonat + montat + legat armatura</b>	25 lei/kg LEI
	<b>Sapatura manuala</b>	50 lei/mc LEI

**Figure 2. Screen capture of the S.O. Betonstahl Konstrukt products page on roct.ro**

*Source: captured from [www.roct.ro](http://www.roct.ro) (2016)*

As of transactions, we had 2 in December, we sold one of our services and we purchased a product. On the 19.12.2014, following the distribution of our offer among the virtual organizations, we received an order on our official e-mail address, [bskonstrukt@gmail.com](mailto:bskonstrukt@gmail.com), to paint a 60 square meters space belonging to S.O. Inter ASTC Ltd. Total value of the order, VAT included, was 14.880 RON, according to Invoice 1 which we issued on the 19<sup>th</sup> December 2014. The payment of this order was made in advance on the same day, and the work was carried starting 22<sup>nd</sup> December 2014.

In order to do the paint job ordered by S.O. Inter ASTC Ltd., we launched an order to S.O. Macons Ltd. to purchase a stock of CAPAROL paint which we needed. We released an order for 5 units of



paint on 22<sup>nd</sup> of December 2014, and the billing was be done same day. Figure 3 depicts a section of the transactions page of S.O. Betonstahl Konstrukt Ltd. on www.roct.ro.

<b>Data</b>	26 Ian 2015, 17:48:38	<b>Suma</b>	1540.08 LEI	<b>TIP</b>	DEBIT
<b>Platitor:</b>	<u>IS BETONSTAHL KONSTRUKT SRL</u>	<b>Beneficiar:</b>	<u>IS SEASTARMANAGEMENT SRL</u>		
<b>Descriere</b>	Contravaloare: 1. Inchiriere sala conferinte; 2. Coffe break; 3. Bufet cald.				
<b>Data</b>	23 Ian 2015, 12:43:18	<b>Suma</b>	1116 LEI	<b>TIP</b>	DEBIT
<b>Platitor:</b>	<u>IS BETONSTAHL KONSTRUKT SRL</u>	<b>Beneficiar:</b>	<u>IS INTER ASTC SRL</u>		
<b>Descriere</b>	Contravaloare factura nr. 2 din 23.01.2015				
<b>Data</b>	22 Dec 2014, 18:20:11	<b>Suma</b>	1798 LEI	<b>TIP</b>	DEBIT
<b>Platitor:</b>	<u>IS BETONSTAHL KONSTRUKT SRL</u>	<b>Beneficiar:</b>	<u>IS MACONS SRL</u>		
<b>Descriere</b>	Plată factura 1 MACONS SRL				
<b>Data</b>	19 Dec 2014, 14:15:53	<b>Suma</b>	14880 LEI	<b>TIP</b>	CREDIT
<b>Platitor:</b>	<u>IS INTER ASTC SRL</u>	<b>Beneficiar:</b>	<u>IS BETONSTAHL KONSTRUKT SRL</u>		
<b>Descriere</b>	C/V factura servicii zugravire				

**Figure 3. Screen capture of the S.O. Betonstahl Konstrukt transactions page on roct.ro**  
 Source: captured from www.roct.ro (2016)

In total, S.O. Betonstahl Konstrukt Ltd. conducted 7 transactions in the 3 months I was their trainer, and at the moment the organization's balance shows 13.336,92 RON. The social capital that the organization started with was 200 RON.

#### 4.2 Problems encountered

Involving students in simulated organizations in the project I was part of revealed a number of limitations of simulated organizations: some of the production processes in the construction and building materials sector cannot be accurately simulated because it would require an initial investment of huge capital of each undertaking; ROCT simulated organizations system deprives some potential demand for construction simulated organizations due to the absence of the state as an actor in the system; reluctance of the students from technical faculties towards economic and

managerial concepts, processes and problems derived from the operation of such companies (Simion-Melinte, Giurgiu & Abrudan, 2015).

However, The Bucharest University of Economic Studies found a lot of common notions while participating in this exercise, and they were thrilled with it.

## **5. HOW CAN UNIVERSITIES IN ROMANIA GAIN COMPETITIVE ADVANTAGE THROUGH THE USE OF SIMULATED ORGANIZATIONS PRACTICE**

According to Michael Porter, whose opinion is shared by almost all the specialists in the field, the competitive advantage is, essentially, related either to a lower cost of the products or services offered by a company or to their differentiation, in one or several respects, from the competition's products.

A strategic approach that allows the organization to benefit from a strategic competitive advantage involves **offering an extra value to the customers and maintaining this position through products and services differentiation.**

**The differentiation strategy mainly consists in making the buyers feel that the product or service the company has to offer is unique**, meaning unmatched on the market, based on one or several attributes the customers value a lot, which allows the company to adopt a high prices strategy (Deac et al., 2016).

As such, we have to wonder, what do university customers, meaning the students, value nowadays? Obviously, they would enjoy learning while using technology. Most of them are quite handy when using a computer and it would be a tremendous step forward from just observing employees at work in a real company.

Take into consideration the following assumptions:

- While practicing, students have to spend 90 hours in a real company, familiarizing themselves with the procedures and documents of a specific department of that company. While involved in a simulated organization though, they get access to any department of the company any time they want to, and can have 24/7 access to the company's documents and ventures. The students I coordinated during CONSIMAT project frequently used position rotation in order to learn more about a specific area of the company.
- During practice university students learn to follow procedures set up by real companies' management. When starting a virtual organization from zero, they get involved in creating the procedures themselves. While this may bring limited added value to students in most economic faculties, students of the Management faculty of The Bucharest University of Economic Studies would find this very useful.
- Simulated organizations stimulate entrepreneurial spirit much more than regular university practice. While involved in a simulated organization, you have to think yourself of what products or services you could sell and to whom.
- Simulated organizations are meant to encourage entrepreneurship among youth, to promote entrepreneurship, and it is, at the same time, a modern way through which students promote themselves, they create friendships and engage in networking in this formal setting (networking is hard to be achieved while formally practicing in a real organizations).

Based on those and not only, our recommendation would be for the Management faculty of The Bucharest University of Economic Studies to consider resorting to simulated organizations in the process of student practice.



## 6. CONCLUSIONS

In an environment in which the risk taken and the uncertainly degree is higher and higher, an organization's ability to elaborate and apply strategies depends, mostly, on the approach of the managers, the experience and the organizational culture. All these factors will influence the efficiency of the adopted strategies. (Cârstea & Păun, 2013)

Universities make no exception to this rule. The universities that will come out victorious will be those whose management demonstrates imagination and creativity to find better suited progress solutions aimed at increasing the university's competitiveness. It is the opinion of the authors of this paper that student practice for economic universities' students should take into consideration a new method, which is practice through simulated organizations, since simulated organizations offer their participants training in: the use of computers; human resources management; accountancy; marketing and sales; entrepreneurship. It is our belief that such a strategic move could ensure the competitive advantage of the universities who undertake it.

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