

# MBA.Con. – Additional knowledge For civil engineers

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**THE MASTER OF BUSINESS ADMINISTRATION DEGREE (MBA)** is the most popular business qualification in the world, and it has become a prerequisite for most management positions. MBA in Construction program launched at the University of Zagreb is specially designed and adapted to the specific needs of the construction industry, as “general” MBA is not always suitable for engineers holding managerial jobs in companies and/or in construction projects... The paper presents problems that have emerged during the execution of the program as well as suggestions for its further improvement. How to sustain the continuity of quality university education while taking into account the reality of the lack of time for education is a problem that faces not only students and their future employers, but in the first place university teachers who are expected to pass on knowledge.

## INTRODUCTION

One hundred years ago, in 1908, the Harvard Business School was established as the first school for business administration. For decades the MBA qualification was offered only in the US. Later, from the 60-ties, European business schools also started to offer MBA programs and curricula have gone a long way and are today taught all around the world. The last fifteen years have seen a massive expansion of providing Master of Business Administration (MBA) degrees around the world, with virtually every university-level business school having one, and some having more than one.

The supply of venues largely exceeds the demand as the market is flooded with a range of MBA programs offering different modes of delivery (there are one-year and two-year degrees,

full-time and part-time degrees, campus-based versus distance learning, general MBA versus “specialized”) and, which is even more important, with different quality of knowledge offered to the students.

Is the MBA a global qualification? Does one size fit all? Should an MBA be offered as a specialization, like our MBA in Construction for example, addressing certain niche markets or should it remain focused on a generalised curriculum supposedly applicable to everyone? Are we in fact doing students a disservice by offering them an MBA in Construction?

According to Purcell (2005), the European MBA market has grown by almost 40 per cent over the last ten years. Examining the UK MBA market, Armstrong (2005) states that there has been a 31 per cent rise in part-

time students during the last decade, a 23 per cent rise in distance learning and a 57 per cent rise in full-time student numbers over the same period.

An MBA specialization is the most highly respected qualification in business. The knowledge of how to manage western-style organized companies effectively is of paramount importance and very much in demand for all kinds of managers-to-be in Croatia. Thus the huge need for “western-style” business education and the growing demand for MBA courses in our part of the world.

The objective of an MBA course, according to Kempner (as cited in Kretovics, 1999), is “to develop managers who will run efficient, profitable enterprises in a competitive world for the creation of wealth in society”. Boyatzis (et al., 2002) sees the objective of graduate management education as preparing people to be outstanding managers and leaders.

The aims of all MBA programs are very clear – to prepare their graduates for managerial roles, help them gain a better understanding of the industrial and business world and its needs, enrich their skills and provide them with competences relevant to their careers. So there is no doubt that we need the kind of education provided by an MBA.

### **Who needs an MBA in construction specialist program?**

When it comes to the construction industry, the MBA programs offering “general managerial training” have to be modified, as they are not completely appropriate for the needs of construction managers. Construction differs fundamentally from all other industries because in a “normal” industry the product changes its place and

the production factors (people and machinery) are static. In construction it is the opposite – the product (the site, the building under construction) is static and does not change its place. When the “production process” is finished “the product” stays where it was made, while the production factors (people and machinery) move on to the next location – to the “next product”.

For years Croatian civil engineers all over the world have been successfully heading building and construction companies and various large-scale projects (dams, nuclear plants, ports, etc). They proved their technical knowledge, skills and expertise while working in different economic and political environments. However, very often they had problems in managing companies and projects (particularly in efficiently managing time and costs/finances), as they had no formal knowledge or training in management and/or project management.

Every manager knows well that the higher his/her position in the managerial structure is, the less he/she has “to do” with solving technical/professional problems and the more time and energy he/she spends in solving “all the other” problems in the company. The perception of the manager’s functions has changed and civil engineers and other technical graduates are becoming aware that they need additional education in the “management field” and the demand for multidisciplinary and interdisciplinary knowledge is growing.

The MBA in Construction given at the University of Zagreb is a program that focuses on construction with the purpose of providing present and future construction managers with knowledge in various non-engineering fields necessary to understand and master complex management processes. Educating civil engineers to be successful

managers, as proposed in our program, widens the circle of knowledge “consumers” by providing engineers with new multidisciplinary and interdisciplinary competencies and knowledge.

### **MBA in construction – international specialist program**

In May 2009 the Ministry of Science, Education and Sport approved the proposed specialist program, making the MBA in Construction one of the few academically verified business management studies in Croatia and also recognizing it as an international postgraduate study course. The program brings 90 ECTS credits, lasts three teaching semesters and a fourth is for writing a final thesis. ([www.grad.hr/mba](http://www.grad.hr/mba))

The program consists of three groups of subjects: Katavić, Matić (2006)

- ▶ general business-management subjects (organisational behaviour and organisation design, business strategy, business ethics, human resource management, decision-making theory, negotiating and business protocol)
- ▶ economic subjects with a special accent on construction (business statistics, marketing strategy, international marketing, accountancy and finances)
- ▶ construction subjects (project planning and control, project management, legal regulations in construction, building maintenance, environmental protection management).

Two teachers teach each subject, one of them Croatian and the other from a European institution, creating a synergy of knowledge and experience as they demonstrate recent national and international practice.

Even when they speak of general subjects, the teachers adapt their lectures to the specific requirements of the construction industry. The theory (especially in the group of economic subjects) has also been modified for students of a technical profession, making it easier for them to follow and understand the non-engineering subjects.

The system evaluating teacher performance, which also serves for collecting evidence about student preferences and interests when structuring program and subjects, consisted of anonymously grading (using a structured questionnaire) each teacher immediately after a lecture, and grading all the teachers again at the end of a semester. At the end of the third semester, when the students had heard all the lectures and got to know all the teachers, they again graded them and at the same time evaluated the entire program by expressing in a grade their level of satisfaction or dissatisfaction with the scope, quality and manner of delivering knowledge.

The program must constantly be adjusted to follow the expressed needs of the students and teachers, the changes brought about by new professional, scientific and methodological knowledge, and those based on changes in the overall environment.

### **Study form of the MBA in construction program at the university of Zagreb**

The teaching is delivered in weeklong modules of all-day teaching at the Post-Graduate Centre in Dubrovnik of Zagreb University, and on weekends in Zagreb at the Centre for life long learning Faculty of Civil Engineering. The students' "isolation" and all-day intensive work in Dubrovnik greatly increases their commitment and al-

lows them to completely focus on internalising new knowledge.

Intensive socializing with colleagues and teachers creates a background for abundant, direct, formal and informal communication where problems and their solutions are aired, presented and discussed publicly and without hesitation. This is leading to the development of group synergy, which besides a positive feeling of belonging also achieves group intelligence and group reasoning, thus creating a network of people who think about the problems of Croatian construction in a similar way.

However, the need for long and continuous absence from work that greatly increases study costs (expenses of travelling, accommodation and food) is a kind of drawback for studies planned in this way (especially in the employer's view).

These problems may be related and formulated as a classical managerial assignment –realising a planned objective (studying efficiently and achieving a given high quality of excellence) under conditions of limited resources (time and money).

When discussing limited resources, the following must be borne in mind:

- ▶ minimising study costs is a trivial but understandable common goal for all the groups in the process (both students and study management),
- ▶ another limiting resource is the availability of quality teachers who successfully combine a university and a professional career,
- ▶ the number of students who comply with the conditions of enrolment and later also with the demands of the studies is also limited,
- ▶ analysing the resource of time is more complex and requires examining not only the time spent

immediately on lectures but also the total time that all the participants use until the student passes the examination or writes the final paper,

- ▶ and last but not least, postgraduate studies for further scientific training have been abolished and specialist post-graduate studies introduced as a key element of lifelong education.

It is this inter-relationship – quality, time and money – that should be crucial in harmonizing study effectiveness and efficiency.

If we start, in addressing this problem, from rationalizing resources, in the first place time, we must consider the introduction of *e-learning* (learning from a distance) as a possible solution. When studies are re-engineered to accommodate information technologies, then it is not the exchange of information in itself that is decisive but the synergy of contacts and the interactive work and relationships between the participants in the process, in this case of students and teachers, which encourages structural transformation and which is designed to result in certain improvements and advances.

However, it is not yet quite clear whether this is the best way. Professional circles do not yet agree about the desirability of *e-learning*, although it is an extremely flexible method of knowledge transfer.

### **Swot analysis of e-learning vs. Traditional methods**

Based on the SWOT-analysis of *e-learning* (shown below) (Kathawala et al.2002) the comparison of traditional MBA study methods and *e-learning* as a new method is presented. Many elements of the analysis can be generally

applied to all *e-learning* methods because they are not specific to MBA programs only.

**S – Strengths** – comparative advantages of *e-learning* vs. traditional methods

- ▶ the global increase in the use of *e-learning* for MBA programs – the main advantage of introducing the new technologies is considered to be the possibility for the mass dissemination of knowledge to dislocated students, combined with rationalisation of absence from work;
- ▶ rationalization of teachers' time, who do not have to take frequent trips but can transfer knowledge from any place where they dispose of the necessary equipment;
- ▶ easier adaptation to the specific needs of every student.

**W – Weaknesses** – comparative disadvantages of *e-learning* vs. traditional methods

- ▶ terms of enrolment: the possibility that some universities may change enrolment requirements (will they still require GMAT or will some other kinds of knowledge be necessary for enrolment, e.g. knowledge of IT);
- ▶ financial aspect: *e-learning* is as a rule cheaper than classical studies, but not in institutions that insist on high-quality programs and teachers;
- ▶ institutions that want a top program must invest a lot in equipment (fast computers, the necessary software, technical support for the entire system and, of course, especially for teachers and students);
- ▶ quality: one of the main arguments against *e-learning* is the somewhat lower quality of the existing distance MBA studies, because they are not on the quality level of the

recognised traditional-method MBA studies.

**O – Opportunities** – what can institutions do to emphasise the advantages of *e-learning*

- ▶ according to some sources, world companies and governments spend about US\$40 billion a year on the education of their employees, with growing *e-learning* participation (from US\$1.8 billion and 700,000 students in 2000 it grew to US\$5.5 billion and 2.2 million students in 2002);
- ▶ universities with a weaker tradition have the opportunity of securing a larger part of the MBA *e-learning* market from the peak universities, which decide to introduce new methods only sporadically.

**T – Threats** – are the warnings that must be taken into account less they become shortcomings that can completely “destroy” the MBA program that uses *e-learning*

- ▶ changes in teaching form: there is a great difference between the traditional and virtual teaching of students. The American university teachers' association finds teaching by *e-learning* more time-consuming and intensive for the teacher because an unavoidable and mandatory part of the teaching process includes individual written communication with each student;
- ▶ change of data base: traditional data bases, such as books, will give way to new combined data bases, which provide teachers with incomparably greater possibilities of creating coherent study courses;
- ▶ change of teaching place: it is a great change to replace a classical classroom with a virtual class in which people communicate by *e-mail* and similar communication tools;

- ▶ changes in student characteristics: greater emphasis is placed on ethics (plagiarizing, having others write papers), personal motivation (no one and nothing forces the student to fulfil certain obligations and tasks), self-discipline, organisational and analytical abilities.

One of the main objections to *e-learning* is the lack of personal student-teacher contacts and the non-existence of personal contacts among students. In this sense the research of Ponzurik et al.(2000) shows that various methodological forms can be used to achieve a consistent structure of lectures, however, some educational adaptations are necessary in the case of *e-learning*.

If the above SWOT analysis is applied to our MBA in Construction program several other specific problems/weaknesses appear.

Given that making studies cheaper is an objective acceptable to the students, this will be difficult to realise on the national market because MBA in Construction targets a small population, on the relatively small Croatian market and is held in small groups (maximum 25 students) so the overall effects of a price reduction would be negligible, but work quality might suffer.

It is not unimportant to point out that technology means nothing without a “brain” – it is not possible to teach a computer to lecture well, only a good teacher can do this, thus the classical teaching form should not be rejected without careful consideration.

Lectures in the form of direct communication are the quintessence of studies, they are their most creative part, the personalisation of knowledge in the creative choice of material, manner of presentation, synthesis of experience and standpoints which can

be influenced and which therefore have a motivating and inspiring effect on both associates and students. This effect cannot be achieved in a mechanically-based relationship in a virtual environment.

However, the future of a program such as MBA in Construction definitely depends on the possibility of finding new ways of knowledge transfer that will require less absence from work. Our target market is young ambitious managers who desire new knowledge and are ready to invest in fulfilling their wishes and needs. Their greatest problem in the realisation of this goal is lack of time, so management studies are faced with the task of finding optimum solutions that will retain and even advance study quality and at the same time shorten the time of absence from work.

## CONCLUSION

To summarise, there is no doubt that the classical concept of MBA studies demands a certain degree of re-engineering through a careful and gradual introduction and combination of traditional and new technologies of knowledge transfer, such as for example *e-learning*. However, it is also certain that the time resource should be optimised through structural adaptation based on continuous organic growth, not on sudden leaps.

Many world universities have introduced so-called hybrid models of

study at some post-graduate level courses (especially specialist studies), which combine traditional methods (direct contacts between students and teachers) and *e-learning*. One of the options in the further development of MBA in Construction lays along these lines, towards the gradual introduction of *e-learning* in some subjects whose contents and accompanying literature is such as to satisfy the criteria of excellence.

Direct communication between each individual student and teacher, among students and between the students as a group and the teacher must be made possible and simple. This will give communication using information technologies a synergic effect of creating a group intelligence, if not as a substitute, then as a supplement and catalyst for the original communication directly realised during lectures and the formal and informal personal communication between teachers and students. Therefore, what we are looking at is adapting the studies by introducing IT technology as a necessary and desirable first step in the modification and advancement of the existing MBA in Construction programme.

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