

# ECONOMY, ORGANIZATION AND CULTURE OF SCHOOLS THROUGH HISTORY: THE HOLISTIC APPROACH TO EDUCATION'S BUSINESS MODEL

Hana elap<sup>1</sup>, Mladen udanov<sup>2</sup>, Gheorghe S voiu<sup>3</sup>

<sup>1</sup> University of Belgrade, Faculty of organizational sciences, Serbia, e-mail: hana.celap@gmail.com

<sup>2</sup> University of Belgrade, Faculty of organizational sciences, Serbia, e-mail: mladenc@fon.bg.ac.rs

<sup>3</sup> University of Pitesti, Str. Targul din Vale, nr.1, Arges, Romania, e-mail gsavoIU@yahoo.com

**Abstract.** *The aim of this article was to provide a comprehensive view of education through the connection of this discipline with other sciences. We analyzed how the economy, culture and spirit of a time can shape the organization and how, later on, organizations affect the faculties and schools. Using The Business Model Canvas, strategic management tool invented by Alexander Osterwalder, we compared elements of traditional approach to education and modern one, in order to find best practices for the education of young people in the 21st century.*

**Keywords:** *education, business model, holistic approach, organization, culture, economy.*

## 1. INTRODUCTION

Talking about philosophy of education in schools, Albert Einstein once wrote:

*"Sometimes one sees in the school simply the instrument for transferring a certain maximum quantity of knowledge to the growing generation. But that is not right. Knowledge is dead; the school however, serves the living. It should develop in the young individuals those qualities and capabilities which are of value for the welfare of the commonwealth."* [1]

Indeed, schools serve the living, born in certain time and place - in a specific historical context. Providing the knowledge collected by that era is not their only task. They are ought to help young individuals to adapt to society in which they live in, by developing capabilities useful in given culture and economy. But how can our schools do so? If we notice that they are failing to successfully complete this mission, what do we do? Other important components of societies have high expectations from education -they are waiting valuable staff to help them to evolve. Still, business, culture and education have little mutual contact, and from there stems a myriad of problems they are sharing, as described in Robinson (2011). [2]

In the area of business, when a system does not perform as expected - despite minor adjustments and aids, methods and techniques of transformational change are often applied. There are numerous methods, techniques and approaches applied in such situations, like restructuring [3] [4], reengineering[5], organizational transformation [6]. Their common denominator is drastic change of strategy, structure and processes – that are dubbed as hard elements of organization by Waterman, Peters and Phillips (1980) [7]. The aim of questioning and changing those elements is to make huge improvements in novel measurements of efficiency and effectiveness. Our article will synthesize description of multi-dimensional changes in

organization (strategy, process, structure) using Osterwalder's and Pigneur's business model canvas [8].

## 2. BUSINESS MODELS IN GENERAL; OSTERWALDER - PIGNEUR CANVAS

**What is business model and what do we need it for?** The business model is a simplified view of how the company functions and earns money by creating value. It is a representation of all relevant elements of the organization and their interconnections [9]. The core of business model is **value** that company creates and explanation of methods used in order to develop and preserve that value and distribute it to desired segments. There is whole network of partnerships that should be made, resources that should be provided, activities that need to be done in order to achieve this. Company should consider what revenue streams and cost structure are the most suitable for organization and conditions they work in.

Minimal changes to each of these elements separately, or in the manner in which they influence each other, can lead to major changes in the results that the company achieves. The business model can also be understood as a guide in translating business strategy into operational processes. Owning fine, completed business model is not in itself a guarantee of success, but mostly is a prerequisite for it. Model is just a proof that the company is aware of its objectives, courses of action, that the leadership agreed about the distinctive advantages that wants to offer and the manner in which to do business. [10]. Whether it will lead to profitability depends on many factors and it remains to be verified in practice.

**The business model canvas** was introduced in Ph.D. dissertation of Alexandar Osterwalder with the help of his professor, Yves Pigneur. It is applicable and practical management tool for defining business, based on 9 blocks. [11]

Those blocks are:

1. Customer segments – defines for whom the organization creates value. Here we decide if some group of customers is a segment, which type of segment and if it is in our interest to serve them.
2. Value proposition – this is not only a product or a service that we offer to the customer, although they are closely related. The value is the solution of a problem that our customer has, or satisfaction of some of his needs, which is provided by our producer service. [12]

3. Channels – defines the best ways of communicating with our customers and reaching them. We also look attentively at costs of different channels and their integration with other elements.
4. Customer relationship – describes expectations of our customers considering our relationships with each and one of them. We think of costs of different channels and their integration with other elements.
5. Revenue streams–examines the dynamics and various methods of payment. For what value are customers willing to pay and in which way and how does that contributes revenue in total.
6. Key resources – fundamental assets we need to have in order to provide our value proposition.
7. Key activities – fundamental activities we need to conduct in order to provide our value proposition.
8. Key partnerships – discovers which are our most important partners, suppliers and distributors, and how are they connected to our key resources and activities.
9. Cost structure – lists all relevant costs company has and considers how they occur.

Left part of canvas is responsible for doing things efficiently, right part is for doing the right things – creating the exact value your customer needs. [13]

### 3. THE BUSINESS MODEL OF TRADITIONAL APPROACH TO EDUCATION

The business model to illustrate traditional approach to education is developed using example of Faculty of Organizational Sciences, University of Belgrade (Serbia) ranked between 300th and 400<sup>th</sup> position of The Academic Ranking of World Universities (ARWU) published and conducted by Shanghai Ranking Consultancy for the year of 2014th. Generalization of our findings can be supported by neoinstitutionalism theory [14], which states that organizations in the same industry and performing similar tasks are very similar. To illustrate that, Harvard or Stanford University (which came 1st and 2nd on that list) have similar blocks in business model to analyze. Most universities today act as “click and mortar” [15] type of organization, with e-curriculum, distant learning programs supplementing their classic “brick and mortar” foundation.

Although technology is taking more and more important role in everyday education, it is often used as one of the other tools in the teaching or the organization of educational process. The process, in its core, remained same for decades, even centuries.

1. Customer segments – It may seem that students are the most significant customers of faculty. They are the ones directly paying for the service, segmented according to their department and level of studies. However, in addition to their role of a customer, graduated students are, in a way, product of educational institutions. Crucial customer of

education is **economy** and organizations that require people with knowledge and skills of a particular profession.

2. Value proposition – For the economy, value is certain number of trained young professionals ready to work and contribute to reaching goals of organizations on market. For students, value is bundle of knowledge and set of skills given to them through undergraduate, master and PhD studies, increasing their chance of employment, advancement and average expected salary. Besides, staff of faculty is publishing research work and giving consulting services that can be used in academic and business sector.
3. Channels – Except for raising awareness about the work of the faculty, which takes place through the media and social networks, scientific journals and conferences - all the other channels that are used by scientific institutions are direct and their own. The process of teaching takes place at the university at predetermined times. University “brick and mortar” building is a place where students get value, where they can complain to some conditions through surveys, inquire about employment after studies and similar actions, however this kind of information can be also obtained on the website of the faculty. There are also online programs for lectures and exams, but they are usually combined with the traditional ones. Actual meeting between students and interested organizations –are often facilitated at the school and partly through the website.
4. Customer relationship – Most of the time, relationship type between faculty and students or companies is personal assistance. That means there is a direct, human interaction between student and professor, face to face or by e- mails. Some part of administrative work is regulated by automated services – such as online profiles of students or companies on internal networks of faculty, which are used for different purposes: applying for exams, notes about vacancies, diverse evaluations...
5. Revenue streams - Revenue streams depend on whether it is private or public college. Income that comes from students is in each case realized in the form of tuition fees-they pay continuous access to the full service during, in most cases an academic year. In some systems, if it is a state university –revenue partly comes from the state budget. If it is private one, revenue is coming from the personal assets of the founder and other companies through various grants and sponsorship programs. Also, significant part of income can come from monetizing knowledge in the practical problems of the industry – various consulting and expert projects, where university, faculty or department engages its teaching and research staff, and keeps percentage of the earning for the institution.

6. Key resources – The most important resources are certainly human - teaching staff of the faculty. Social aspect of that capital is sometimes much more important – general reputation and prestige of certain university is often determining factor for positioning among the best institutions, as well as social networks of professionals employed by the university. Intellectual resources, such as special teaching methods, patents and works of professors and students, should be treated with special care. From physical resources it is important to mention faculty building and the necessary technical equipment for teaching.
7. Key activities – Key activities are determined by the teaching process. Dissemination of knowledge by lectures, checking attainment of knowledge by exams, acquiring the knowledge by research or application distinguish as most common activities. They are however tangled in their implementation and goals – knowledge attainment can be checked by research of students at MSc and PhD level of studies, and knowledge can be disseminated by practice in the industry.
8. Key partnerships – Students, professors, industry, and external researchers-all have different types of partnership with the university. The main motive for their conclusion is proper allocation of human and intellectual resources-future employees and their knowledge. Another key thing to remember is reduced risk of mismatch between demand and offer in the labor market by joint planning.
9. Cost structure – Faculties are mostly value – driven organizations (as opposed to cost – driven ones). That doesn't mean that minimizing cost is not their objective, just which their focus is on quality of service. They are relying on economy of scale – once they develop well-structured and useful program, they try to enroll as many students as they can, in order to obtain cost advantages.

According to Osterwalder, the canvas of traditional approach would look like this (figure 1):

|   |  |  |   |   |
|---|--|--|---|---|
| Students, professors, organizations, and external researchers | Knowledge acquisition<br>Knowledge dissemination<br>Knowledge examination  | Bundle of knowledge and set of skills<br>Trained young professionals<br>Research work and consulting services  | Direct interaction between student and professor (face to face, e- mails)<br>Online profiles of students or companies on internal network | Students segmented by field of interest and level study<br>Economy searching for educated workforce |
|   | Teaching staff<br>University building<br>University image and prestige<br>Technical equipment for teaching processes<br>Teaching methods, patents and intellectual property of professors and students |  | Media and social networks, scientific journals and conferences<br>University building<br>Website of the faculty<br>Online courses         |   |
| Value – driven organizations<br>Economy of scope              |  | Income from students - tuition fees<br>State university – the state budget<br>Sponsorship programs<br>Research grants<br>Fees for consulting and expert projects |   |   |

**Fig 1.** The business model of the traditional approach to education

#### 4. THE BUSINESS MODEL OF MOOCS

Education today resembles transportation industry in the times of steam engine introduction. The advent of MOOCs and other forms of distant and blended learning introduce paradigm change in the technology for the core processes – acquisition, dissemination and examination of knowledge. We can't deny there is a trend nowadays towards specific form of education that differs from traditional. Excellent examples of it are courses on Coursera, video lessons on Khan Academy or your favourite TED talks: any type of Massive Open Online Course – MOOC.

Without holistic observation, it seems it is just a "modern version" of old principles, but when we break down the MOOC approach into smaller blocks of a business model, it is evident that it is completely different business philosophy. The concepts of literacy, access to knowledge of any kind and costs of it are redefining faster than ever. These facts are raising the issues of intellectual property, privacy and security on the internet, as well as learning ethics in online world.

1. Customer segments – First significant distinction in business models of these approaches is customer segment. Education is now brought to anyone with internet connection, regardless of age, origin, educational background, or financial assets. That revolution is similar to the revolution of mass education in the XIX century, when state offered free education. Mass market of students act as prosumers [16] – they simultaneously produce and consume value. MOOC business models are mostly functioning as multi – sided platforms, which means that they need to have universities or professors on one side of platform, and students on another in order to work. If you do not have mass of interested students, it is hard to attract world-class professors, and if you do not have world-class professors it is hard to attract large number of students – often tens of thousands per course. Economy is again main and final consumer of created value, since people who learn can contribute to organizations they work in. Finally, existing universities and other educational institutions are customer, which is not the case in traditional approach. They can learn from other institutions or use platforms to promote themselves.

2. Value proposition – MOOCs are offering more specific knowledge to potential users – they can choose exactly which courses they will listen and neglect others. That may mean they won't make the bigger picture of a field they study, but they are free to make their own curriculum and to decide upon their tempo of learning. Values such as interactivity in learning, freedom and customized lessons are changing the needs and motivation of learners. Organizations that will employ those learners and faculties can get promotion through offering courses, same kind of knowledge as students, if their staff takes the same courses and professionals that are extremely self – driven and interested in particular matter.
3. Channels – Platform is the main channel between user and educator/institution, and all of the process - delivering the value, evaluation of it and contact with other learners of professor is made through it. Promotion of MOOC or platform itself can be done through social networks or media. Also, students often take proactive stance and communicate on the MOOC issues, delivering part of the MOOC value via separate social media channels. Channel is direct and own from perspective of platform founders, but universities or persons that offer videos consider it indirect, partner channel (unless they develop their own platform).
4. Customer relationship – Given the circumstances, customer relationship can be a bit complex in this approach. It is combination of all types of relationship we have known so far. Student is using personal online profile that provides him customized service. Then again, he can find online personal tutor or ask for a help on a specific question and get some sort of (dedicated) personal assistance. If that is not an option - platform is based on self service. Maybe the best thing of all, considering customer relationship is crowdsourcing. All students of one MOOC form online community, through platform and forums on it. They can discuss the program and co-create rules or unites, bringing a whole new value to the process of learning.
5. Revenue streams – Revenues are obtained from various kinds of sponsorships and partnerships with universities and companies. For instance, Khan Academy is getting funding from Bill & Melinda Gates Foundation and Google. Mostly, platforms are not charging listening to tutorials and courses, not even participating in them (tests, forums). Some of them charge the final certificate the send you. That is called Freemium business model. Usually, platform owners sign a contract with faculty that is providing course and agree upon a percentage of gross revenue that will go to them.

6. Key resources – Platform. Wide network of partners and sponsors that are providing intellectual and financial capital for platform. Ownership of all knowledge, methods and patents explained through MOOCs. Another important resource are databases of customers and their learning habits. Valuable human resource is ICT personnel servicing the platform.
7. Key activities – Considering what the key resource is, it is understandable that key activities are development of platform – both technically and by managing requests of all partners and users. Promoting the brand of platform is equally important. Compensation for the party developing and implementing courses is often partly monetary, and partly in propagating image of the course, professor teaching the course, or the institution endorsing that course.
8. Key partnerships – Universities that are preparing courses, organizations, foundations and institutions that are helping financially and most active customers that are contributing with their suggestions.
9. Cost structure – Platforms that offer MOOCs are value – driven. They are relying both on economy of scope and economy of scale. At the same time, they tend to increase the number of users and range of services that they offer. This is done in order to pay off high fixed costs of maintaining platform. Comparable to costs of delivering the course per student in classical approach, MOOCs are often incomparably more economic due to economy of scale.

The Osterwalder’s and Pigneur’s business model canvas of MOOC approach is presented in the following figure, with specific segments and corresponding values highlighted by the same colors behind text (figure 2):

|  |   |  |  |   |
|--|---|--|--|---|
| Academic staff and institutions developing and implementing courses<br>Organizations, foundations and institutions that are helping financially<br>Most active customers contributing with their suggestions | Development of platform – both technically and by managing requests of all partners and users<br>Promoting the brand of platform                                    | Specific knowledge<br>Interactivity in learning and freedom to make customized curriculum and tempo of learning<br>Promotion and income through offering courses<br>Professionals that are extremely self – driven and interested in particular matter | Personal online profile that provides customized service<br>Online personal tutor personal assistance or self service<br>Crowdsourcing - students of one MOOC form online community, through platform and forums on it | Mass market of students - anyone with internet connection<br>Economy - corporations, small and medium enterprises of private and public sector<br>Academic staff and institutions |
|  | Platform<br>Network of partners and sponsors<br>Ownership of intellectual property on MOOCs<br>Databases of customers and their learning habits<br>IT support staff |  | Platform<br>Media and social networks  |   |
| Value – driven organizations<br>Economy of scope and economy of scale<br>High fixed costs of maintaining platform  |   | Sponsorships and partnerships with universities and companies<br>Freemium business model (e.g. - charging only final certificate)  |  |   |

**Fig. 2** The business model of MOOCs

## 5. THE CUSTOMER IS ALWAYS RIGHT: THE ECONOMY DICTATES THE BUSINESS MODEL OF EDUCATION

To begin with, **can era shape the organization?** To put it another way – do economy, culture and spirit of time effect all organizations established in it?

Many experts in management, economics, sociology and education dealt with this hypothesis. American sociologist Arthur Stinchcombe wrote his book *"Social Structure and Organizations"* fifty years ago. He defined term 'Social structure' as 'groups, institutions, laws, population characteristics, set of social relations that form environment of organizations; any stable characteristics of society outside the organization'. [17]

He then claimed that this structure has impact on the rate of foundation of organizations, especially if they have new kind of organizational structure. According to him, time in which certain industry is created has effect on social structure of all organizations that are created in that period. Likewise, organizations have effect on social structure, people that work and live in time during which their business is developing. He compared older industries, such as a textile company or a farm, with industries of twentieth century, such as automotive industry. For instance, majority of organizations that are working in new industries have staff that is educated on colleges or universities. Family companies with informal structure became rare. These qualities are completely opposite to the ones valued in 'old' organizations.

Henry Mintzberg followed up on the work of Arthur Stinchcombe. In his book *"Structure in Fives: Designing Effective Organizations"* he continued to question the connections between organizational structure and an era that organization is founded in. What is more, he wanted to discover does that hypothesis applies to modern sciences (like discovering laws in aerospace). There are five structural configurations that considered, from simple structure to adhocracy. Their differences were portrayed through dimensions of organization structure. The evidence noted in his book suggests that every type of organization had traces of a specific era in it. He remarked:

*"Change in the Professional Bureaucracy does not sweep in from new administrators taking office to announce major reforms, nor does it from government techno-structures intent on bringing the professionals under their control. Rather, change seeps in by the slow process of changing the professionals—changing who can enter the profession, what they learn in its professional schools (norms as well as skills and knowledge), and thereafter how willing they are to upgrade their skills."* [18]

Changing structure of a company or a society actually comes from changing the individual, during the process in which education plays the most important role.

Another respected author in this field, Alfred Chandler, wrote the book *"Strategy and Structure: Chapters in the History of the Industrial Enterprise"*. He studied way of doing

business in large American companies (Du Pont, General Motors) in order to support the claim that structure follows strategy. Book indicates that appearance of new technology or transformation on the market requires from the company to adjust its direction and mode of operation. In other words – company should redefine its strategy if external circumstances change significantly. To make this strategy work, organization is ought to modify their structure, too. The mismatch between the growth and development of the internal structure can only lead to economic inefficiency – says Chandler. [19]

*With this in mind... can era shape a school? How do we build our educational system?*

## 6. CONCLUSION

We are witnessing tremendous shifts in philosophy of education. Yet, they are somehow familiar to us. In light of time that we live in, we could almost predict virtual classrooms and globalization of knowledge. Similar tendencies can easily be observed in the economy. It is not mere coincidence that Osterwalder's business model starts with analyzing the customer segment. We need to get to know our customers well, if we want to satisfy their needs and solve their problems in the best way possible. Traditional and MOOC approach have many differences, but one thing remained the same – main customer of education, whatever its form is – is economy. No wonder educational institutions try to mimic the laws recognized on the market or structure of companies in which students should work afterwards. If we draw an analogy between types of school and types of organizations through time, we can see that faculties that exist today, even the best ones - reminds us of Henry Ford's factory – the flamboyant vanguard of the industrial era. On the other hand, we have platforms that provide MOOCs and other sorts of inspirational and creative ways of studying – those platforms are mirroring our economy of today. They are following dot.com companies, they are preparing students for modern labor market and give them the real picture of what is ahead. Why are we, then, so reluctant to change the way formal education system work?

One of the most vocal experts on the subject of education, that is asking this question, is Sir Ken Robinson. His speech, entitled *"Changing education paradigms"* is addressing this problem and explains the significance of it. To illustrate this issue, he is describing students as if they were just getting off the production line – classified by 'date of manufacture', with standardized set of skills and knowledge, got used to ringing bells and strict rules that are preventing them to express any unique talent they have. [20] The consequences of this system are immeasurable: beside obvious lack of motivation and decreasing divergent thinking, new generations are left to cope alone with challenges of new economy that is waiting for them.

There is no one correct solution to this situation. What should we do today, if we want to have better schools tomorrow? Maybe the first step forward is admitting that

philosophy of schools needs to be changed and that must be done through holistic approach to education. Then, we could learn something from this brand-new kind teaching - from MOOCs. Some useful lessons could be:

*“The fact is that given the challenges we face, education doesn’t need to be reformed - it needs to be transformed. The key to this transformation is **not to standardize** education, **but to personalize** it, to build achievement on discovering the individual talents of each child, to put students in an environment where they want to learn and where they can naturally discover their true passions.”* -Ken Robinson, *The Element: How Finding Your Passion Changes Everything*. [21]

*“The same products, services or technologies can fail or succeed depending on the business model you choose. Exploring the possibilities is critical to finding a successful business model. Settling on first ideas risks the possibility of missing potential that can only be discovered by prototyping and testing different alternatives.”* -Alexander Osterwalder

## 7. REFERENCES

- [1] Einstein, A. (1956). *Out of my later years*. Secaucus, NJ: Citadell Press.
- [2] Robinson, K. (2011). *Out of our minds: Learning to be creative*. John Wiley & Sons.
- [3] Waterman, R. H., Peters, T. J., & Phillips, J. R. (1980). Structure is not organization. *Business Horizons*, 23(3), 14-26.
- [4] Bowman, E. H., & Singh, H. (1993). Corporate restructuring: Reconfiguring the firm. *Strategic Management Journal*, 14(S1), 5-14.
- [5] Vance, D. (2009). *Corporate Restructuring: From Cause Analysis to Execution*. Springer Science & Business Media.
- [6] Hammer, M. (1990). Reengineering work: don't automate, obliterate. *Harvard business review*, 68(4), 104-112.
- [7] Romanelli, E., & Tushman, M. L. (1994). Organizational transformation as punctuated equilibrium: An empirical test.

*Academy of Management Journal*, 37(5), 1141-1166.

[8] Osterwalder, A., & Pigneur, Y. (2010). *Business Model Generation: A Handbook For Visionaries, Game Changers, And Challengers* Author: Alexander Osterwalder, Yves." (p. 288). Wiley.

[9] Alexander Osterwalder (2004): The business model ontology, a proposition in a design science approach

[10] Ljubomir Drakulevski, Leonid Nakov (2014): Managing Business Model as Function of Organizational Dynamism

[11] Alexander Osterwalder, Yves Pigneur (2009): Business model generation

[12] Alexander Osterwalder (2012): Think about Jobs, Pains, Gains – The Wall Street Journal blog

[13] Alexander Osterwalder, Yves Pigneur (2009): Business model generation

[14] DiMaggio, P. J., Powell, W. W. (1983): The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields, *American sociological review*, str. 147-160

[15] Steinfield, C. (2002). Understanding click and mortar e-commerce approaches: A conceptual framework and research agenda. *Journal of Interactive Advertising*, 2(2), 1-10.

[16] Kotler, P. (1986). Prosumers - A New Type of Consumer. *Futurist*, 20(5), 24-25.

[17] Arthur Stinchcombe (1965): Social Structure and Organizations

[18] Henry Mintzberg (1983): Structure in Fives: Designing Effective Organizations

[19] Alfred Chandler (1962): Strategy and Structure: Chapters in the History of the Industrial Enterprise

[20] Sir Ken Robinson (2008): Changing Education Paradigms

[21] Sir Ken Robinson (2009): *The Element: How Finding Your Passion Changes Everything*.