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EDUCATIONAL MODELS IN CLUSTER FUSION

The author substantiates the necessity of implementing global education models for institutional development of the economic system in the context of cluster integration. The author makes available the recommendations for the introduction of advanced educational model with its structural advantages in the process of institutional component of economic behavior.

Keywords: clusters, local educational systems, economic education model, progressive education model.

Присяжнюк А. Образовательные модели в кластерной интеграции.
Обоснована необходимость имплементации мировых образовательных моделей для институционального развития экономической системы в контексте кластерной интеграции. Предложены рекомендации по внедрению консолидированной образовательной модели, определены ее конструктивные преимущества в процессе формирования институциональной составляющей экономического поведения.

Ключевые слова: кластеры, локальные системы образования, экономическая модель образования, прогрессивная образовательная модель.

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Background. The education plays an important role in the clusters by serving as a "knowledge bank" and "think tank" for a network of organizations. As a knowledge bank, it attempts to aid local educational systems by providing "a high-quality knowledge base for education reforms at the global level." Organization networks as clusters spread an economization of education viewpoint stressing the contribution of schooling to economic growth through investment in human capital. In clusters a great deal of emphasis is paid on determining outcomes to educational investment and the creation of human capital.

Clusters involves education for a global labor market using human capital economic theories. These theories focus on shaping human behavior and knowledge to meet corporate needs. Simply stated, human capital economists claim that investment in education to produce better workers will result in economic growth, reduction of inequality of incomes, and increased employment. All of these activities are occurring across global networks composed of scholars, university administrations, for-profit publishing and knowledge companies, inter-governmental organizations, and higher education organizations.

In this context for Ukraine is very important to choose the right educational model in cluster cooperation because the relevant educational system is too weak to create a platform for economic growth through cluster initiatives. With regard to the above mentioned present-day clusters deals with the economization of education. It means the increasing influence of educational research conducted by economists and judging school outcomes in economic terms.

Analysis of recent research and publications. Institutional development of the economic system as a result of organizational transformation by clustering of businesses in recent times provides the basis for the modernization of a number of scientific concepts, which is gradually moving away from theories internals and externals and enhance integration trends with clustering. These concepts are reflected in the scientific improvements of these researchers A. Mazaraki [1], V. Soloviova [2], L. Fedulova [3]. Mainly the problem of educational models considered foreign scientists and practices, the most interesting work is presented by Michael Apple [4], Roger Dale [5], J. Spring [6], Richard Thale [7], Martin Carnoyand, Diane Rhoten [8].

At the same time for each of the economic system characterized by its own specific model of clustering and therefore its educational component, which is why these issues will always be the focus of the scientific environment. So, let`s concentrates on the global trends of educational models in cluster Economy.

The **aim** of the objective of the study is devoted to the education models in clusters and selecting the most rational from the standpoint of the realities of cluster development Economy of Ukraine.

Materials and methods. Theoretical and methodological basis of researches were: scientific works of domestic and foreign economists in the problems of global education in connection with organizational transformation by clustering of businesses, the efficiency of educational models in cluster cooperation. Multidimensional nature of research has led to the use of complex of scientific methods, namely: systems approach, structural-functional analysis, comparative-typological analysis, induction and deduction, analysis of statistic data and so on.

Results. The Economic Education Model refers to making the primary goal of schooling to be economic and income growth and to rely on economic research to guide school policies. This makes education an economic function that includes analyzing the education through the lenses of an economist. Looking through the lens of economization, funding schools becomes investing in human capital, namely students, for the purpose improving the workforce [9].

Economic Education Model includes: education considered as an investment in the workforce; students are considered as human capital to be educated for work; skills-based instruction; accountability of school programs using student test scores; performance evaluation of administrators, teachers, and school programs based on standardized testing of students; teaching English as language of global business; the goal of education is educating workers to compete in the global economy; the value of education is measured by economic growth and development (*figure 1*).

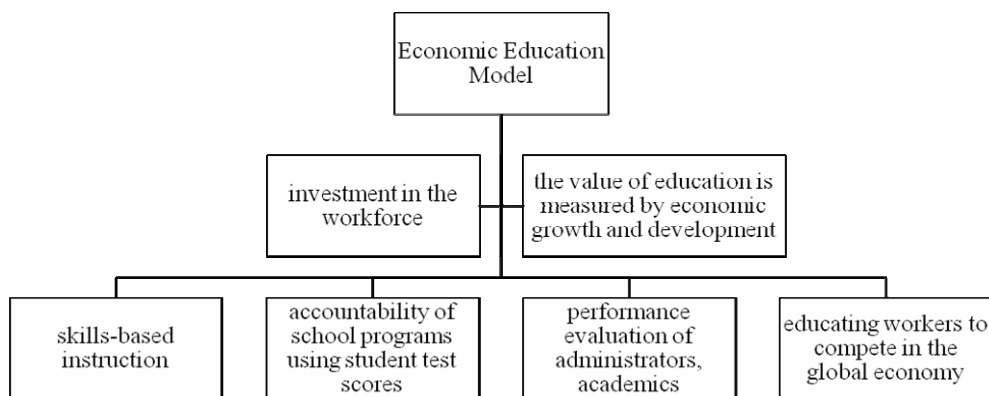


Figure 1. Basic components of the Economic Education Model
(compiled by the author according to [10])

It is critical to underscore that reinforcing and expanding on the economization of education and the economic education model is a significant part of the World Bank clustering policy. In the context of increased attention to cluster generation in Ukraine it is an obligatory to be involved

into World Bank Education Strategy 2020. The economization of education perspective is reflected in the 2020 education strategy's refrain: "Invest early. Invest smartly. Invest for all". A very important shift in emphasis from school credentials and years of school attendance to learning work skills is contained in the Bank's 2020 strategy: "The new strategy focuses on learning for a simple reason: economy growth, development, and poverty reduction depend on the knowledge and skills that people acquire, not the number of years that they sit in a classroom" [11].

The World Bank's reasoning reinforces the economic education model by shifting from a concern about everyone attending school to one that students learn work skills. The World Bank claims, "... Recent research shows that the level of skills in a workforce predicts economic growth rates far better than do average schooling levels" [12].

The economization of education viewpoint gives the impression that economic clusters, their effective strength are dependent on academics commitment and students learning work skills. However, mentioned above can be a result of crises in the economic system, such as bank failures, corporate greed, or a host of other factors. The World Bank recognizes the potential for economic meltdowns but claims education can help: "Better coping with economic shocks. Clusters with more education cope better with economic shocks than less educated clusters, since they tend to have more resources and knowledge about how to cope with income fluctuations".

Economic Education Model is the base for innovative economic renewal and most contributes to the formation of innovation clusters. This form of clustering involves considerable expenditure on education and science. It is telling fact that public and private outlay in the US on science per capita in 2013 was 293 thousand USD, in Japan – 264 thousand USD, China – 74 thousand USD. In Ukraine public expenditure per capita for the same period was less than 8 thousand dollars.

From this it follows that 39 Ukraine's position in the international ranking SC Imago Journal & Country Rank exposes a significant reduction in the number of employees of scientific and innovative sphere – 3.3 times [3]; the inertia of growth, according to the introduction of new technologies in Ukraine is 0.7 %, at the same time in developed countries this figure reaches 60 to 90 %; financing of the scientific field at the level of 0.3 % of GDP, on the other hand in Europe there is a clearly defined standard – not less than 3 % of GDP.

In our opinion to overcome the alarming trends in the scientific and educational sphere in Ukraine it is necessary to clearly identify the motivational factors and financial architecture capitalization of human capital, to recognize the priority of high-tech industry and at last to generate innovative processes.

However, the state is obliged to ensure the financing of scientific and scientific-technical activities in the amount of 1.7 % of GDP as defined by applicable law, and not the annual budget spending of outlay on education and science, and diversification of the financial motivation of education, academic and research workers and, finally, to translate scientific and educational activities from the plane of "utopia" into public policy.

Not less interesting is Progressive Education Model. Progressive education theories were born in the work of John Dewey in the late nineteenth and early twentieth centuries. Today, progressive methods of instruction are embedded in human rights, peace, social justice, liberation, and environmental education. Dewey wanted to develop methods that would demonstrate to the student the social value of knowledge and the interdependence of society [6]. One method Dewey hoped would achieve these objectives was the development of social imagination through cooperative group activities.

Our opinion about this idea is that the cluster economy is the result of the social partnership, therefore this model makes profound effects. This model provides more teacher and student control of curriculum and instruction. In contrast to the economization of education model, the goal of the progressive model is to educate citizens who are conscious of social injustices and actively work to correct them. Dewey's ideas on active learning and preparing students to solve social problems are now part of many different educational programs seeking social justice, peace, human rights, and environmental protection, as well as liberation from authoritarian governments.

Progressive Education World Model consists of [13, p. 17]: learning how to change political, social, and economic institutions; preparing students to participate in issues of social justice, human rights, and environmental protection; learning based on students' interests and participation; effective learning; teacher-determined assessment; protection of local languages; education for ensuring social justice; education for active participation in determining social and political change.

World practice in the clustering of the economy shows that for effective functioning of the cluster as ecosystem its components should be combined both above-mentioned models. Increasingly the modern cluster focused on scientific potential of University education than the economic potential of the business structures. The specification of economic development of each country dictates the optimal set of Education Models components. In accordance that in Ukraine the potential of clustering in Economics has a social dimension it is important to adhere it in the formation of clusters, hence the optimal educational model will be it consolidated type (*figure 2*).

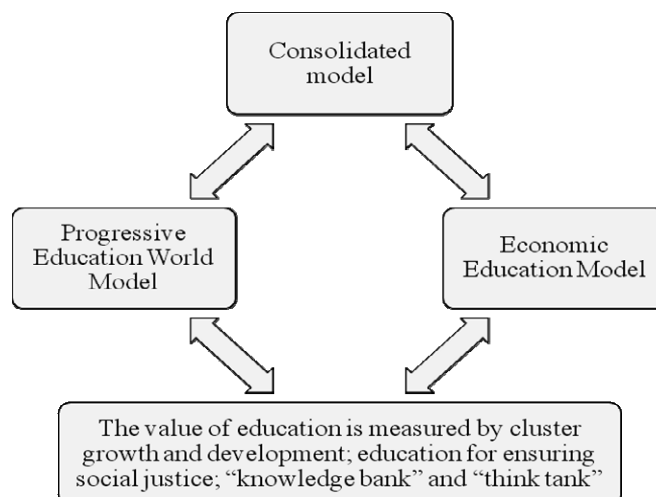


Figure 2. Consolidated Education Model
(suggested by the author)

Conclusion. Summarizing previous research, we came to the conclusion there is a major difference between the Economic Education Model and the Progressive Education Model. In schools, the Economic Education Model controls teachers' behaviors through a prescribed national curriculum and reliance on standardized testing with the goal of educating workers for the global economy. In the Progressive Education World Model, students are actively educated to change the world in the name of social justice.

Finally, for the development of the Ukrainian economy and society based on the cluster model, it is important to recognize the need for both models of education as a whole. Such a model should include the basic features of both the previous and thereby contribute to the development of human capital as the basis of innovation clusters.

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Присяжнюк А. Освітні моделі в кластерній інтеграції.

Постановка проблеми. Освіта відіграє важливу роль у формуванні кластерів, виступаючи як "банк знань" та "мозковий центр" для мережових організацій. Організація кластерних утворень вимагає розуміння та впровадження концепції економізації освіти, що сприяє економічному зростанню не тільки за рахунок ресурсного забезпечення, а й завдяки інвестиціям у людський капітал. У кластерах велика увага приділяється освітнім інвестиціям, тому вкрай важливо обрати адекватну освітню модель для ефективної реалізації кластерних ініціатив.

Метою дослідження є визначення концептуальних відмінностей між економічною моделлю освіти і прогресивною формою освітньої моделі, обґрунтування необхідності впровадження консолідованої освітньої моделі в контексті кластерних ініціатив.

Матеріали та методи. Застосовано комплекс наукових методів: системний підхід, структурно-функціональний та порівняльно-типологічний аналіз, індукція, дедукція, аналіз статистичних даних тощо.

Результати дослідження. Обґрунтовано необхідність імплементації світових освітніх моделей для інституційного розвитку економічної системи в контексті

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кластерної інтеграції. Запропоновано рекомендації щодо впровадження консолідованої освітньої моделі, визначено її конструктивні переваги в процесі формування інституційної складової економічної поведінки.

Висновки. *Економічна модель вищої освіти передбачає традиційні освітні програми і поведінкові стандарти навчання в навчальних закладах, при цьому економічний потенціал людського ресурсу реалізується через програми співпраці в рамках кластера. Прогресивна модель освіти сконцентрована на соціалізації економічної співпраці навчальних закладів й бізнесу. Для розвитку української економіки і суспільства на кластерних засадах важливо визнати необхідність консолідованої освітньої моделі. Така модель, що базується на когерентній єдності економічних та прогресивних освітніх моделей, сприятиме розвитку людського капіталу як основи кластерів.*

Ключові слова: кластери, локальні системи освіти, економічна модель освіти, прогресивна освітня модель.