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Models of Integrated Interactions Organization in the Field of Environmental Education

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Abstract

Purpose of the study: The purpose of this research is to justify the essence of integration interaction organization in the field of environmental education, as an interaction and estimation abstract model of the application prospects. Methodology: The leading approach to the study of this problem was the content analysis of scientific-theoretical and practical materials, expert assessments on the problems of business interaction and organizational integration in education. Results: Results of the study consists in the fact that the authors described in fundamental provisions of the abstract models of integrated interactions organization in the field of environmental education, supplemented of systematization criterion "Way of integration" : educational consortium, educational partnership, regional educational center, resource training center, in terms of the degree of uncertainty and completeness of interaction. The theoretical significance of the article material is deepening and expanding scientific and methodological approaches to the study of organizational integration various forms to improve the environmental education quality. Applications of this study: The materials of the article are of practical importance for educational organizations introducing organizational integration various forms. Novelty/Originality of this study: The originality of the study is to confirm the choice of the business partnership model defined by realization of innovative and standard practices in environmental education. The novelty of the research results consists in adapting business partnerships interaction models of to the organization of integrated interaction in the field of environmental education.

Keywords: education, abstract model, organizational interaction, environmental education.

1 Introduction

According to general opinion of researchers, the educational process is a collection of interconnected organizational and economic operations that aims at reproducible and repeatable results of educational program execution for a certain time interval (26). For the last decade, the educational organization have been replacing hierarchically aligned models of learning in the field of ecology and technological approaches to their execution on the business partnerships model and integrated processes in education. This was their response to the demands of the external environment to ensure the sustainability of life in the conditions of ever-increasing changes for individuals and their communities, for business entities and their associations, for states and their unions.

It should be noted that the implementation logic of integrated educational process is more complicated compared to the technological process of learning ecology, and in the interaction organization and management of the parties involved in the integration, there are some peculiarities. Thus, technological processes are less focused on the description of the participants interaction in the execution of the educational process (22). On the contrary, the interaction of integration participants on the coordinated application of all skills that may be needed to respond to requests from the external environment, is an essential component of the effect in education. In this regard, it is important to have integration participants coordination and a high propensity from process performers to business interactions. Compared to

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technological processes those of organizational interaction undergo changes much more often. Usually this occurs following the change in the conditions for organizing innovative and standard practices in training and increases the risk of unacceptably large cost for modification an integrated process for converting information and resources (10,16,24).

What has been said above actualizes the problem of developing abstract models of integrated interactions organization in the field of environmental education. Such models must have certain similarity with respect to the original, and based on this the creation of material (executable) models will be productive that will be invariant in meeting at least some of the environment requirements.

2 Methodological Framework

To define the essence of integration interaction organization in the field of environmental education, as an abstract model of interaction and prospect estimates of its application methods we used content analysis of scientific-theoretical and practical materials, expert evaluations on the problems of business interaction and organizational integration in education.

Application of these methods helped to solve the problem of modeling the ratio between direct participants of the first business partnership on the theoretical foundations research:

- Business models (for example, school activity systems (Activity system school), process school (Process school), cognitive school (Cognitive school), technology school (Technology-driven school), school of strategic choice (Strategic choiceschool), recombination school (Recombination school), dual school (Duality school), etc.) (11);
- Marketing affiliate Relations (3,5,15,25);
- Competitive advantages organizations (2,7,8).

For the approaches discussed above, the explanation of causes and consequences lies at the intersection of the resource approach problem fields and the relational approach to finding a strategic advantage due to changes in organizational structures. We also observe consent in the fact that the changes are applied to inner data streams of parties involved in the inter-organization interactions. The leading feature in integrated interactions are traditionally considered the ability of business partners to establish relationships among themselves in a non-systemic manner. This ability is manifested through communicating, that is information exchange between the participants of the business partnership. During the exchange there occurs identification, firstly, external requirements, allowing you to define the purpose, and secondly, mutual claims to the organizational system in place the fact of interaction to modify the properties of the educational program.

Communicating is characterized by instability and informational, and material reflection of the parameters established for the processes of meeting the updated external environment requirements. The level of instability causes the reaction of mutual influence of integration participants in environmental education from the following:

- individuals and their groups, including professionally related to participation in information and resources transformation processes, for private benefits in the educational programs' implementation (21);
- organizations contributing to the identification and attraction of resources from the external environment to achieve standard learning outcomes;
- organizations - carriers of external environment resources for the execution of production and organizational processes in the implementation of educational programs.

As a result of changes in the relations realized by partners in the space of discrete states of the integrated process, information evolves (turns into a new quality). It is believed, along with the change of information and business partnership will consistently go through the life cycle stage of relations development, stage of stagnation, stage of decline. And the main difference of one business partnership organizational system from the other will determine the time of each stage implementation.

We need to recall that the beginning of solving the information movement problem following a change in business environment conditions was given by the methodology of business process reengineering (1, 12, 13). Its continuation are business cases of best practices (17,18,19). In the future, theoretical concepts of controlling end-to-end processes were developed (4, 23, 27). However, we need to take into account the need to adopt the following academic position at the transition from the competition in environmental education to cooperation: the uncertainty compensator role in the value of playing in an integrated manner performs dominant element. And for that, it solves problems relating to satisfy the requirements on a variety of data presence (hidden knowledge and information), which are keeping the parties to integrate in different organizational systems, characterized by properties timelines methods performance, evaluation and control methods.

3 Results and Discussion

3.1 Abstract Model Development for the Integrated Interactions Organization in the Field of Environmental Education

According to the results of the study it can be concluded that while developing abstract models of integrated interactions organization in the field of environmental education the following points are fundamental:

- each participant of a business partnership builds a joint activity around processes (choice including transaction costs), which by their nature differ from the existing organizational processes (choice including coordination costs);
- the problem of ambiguity of choice is resolved by the participant in a business partnership who generates external events, has the ability to influence the characteristics of interactions. In other words, who dominates the integrated processes, acts as the leading compensator of uncertainty in it;
- at the initial stage of the joint activity, all participants of the business partnership should have an idea of the values that have yet to be created and the expected timing of interaction in order to create new value.

We believe, the choice of business partnership model is determined by the prospects for innovative and standard environmental education practices implementation. Conditions relevant to the organization of one and the other type of practice are presented in the table 1. Based on their strongest sides, partnership participants create an opportunity in environmental education, focusing on one or more value factors (consumer, service, scale, positioning).

Table 1: The organization conditions of innovative and standard practices in the process of providing educational services

Conditions	Nature of organization	
	Innovative practices	Standard practices
Complex complementary asset management	A variety of services while minimizing the share of assets adapted to a one-time (developing) learning process in general pedagogical (private pedagogical) technology.	Unification of services to obtain an economic effect on the scale in a repetitive learning process in general pedagogical (private pedagogical) technology.
Processes conversions information and resources	Unique (developing) processes (production, organizational, regulatory) with the unpredictable probability of failure in obtaining parameters of the material implementation of the system's response to external demand.	Stabilized processes (production, organizational, regulatory) with a predictable probability of failure to obtain the parameters of the material implementation of the system's response to external demand.
Control by processes	On the state of the control object with feedback and (or) project control method.	Software control method.
People management and their groups	Management of abilities and skills, focused on the formation of new practices.	Management of competencies based on existing technologies, application of best practices and organizational knowledge.
Control condition resources	Estimated financing costs.	Budgeting and evaluation of financial activities.
Control structure systems	Process organization with functional adjustment.	Hierarchical organization of interacting subsystems with coordination at the higher level.

Source: compiled by O.L. Kondratieva and M.I. Razumovskaya (14)

In this case, substrate (real) interactions are arranged according to external environment actualized requests materialization. In other words, it is the very same technology integrated educational process, which is highlighted from the usual activities. To explain the evolution of an integrated educational process there introduced the conception of dynamic capabilities for innovative and standard practices in relation to the logical knowledge chain and experience - the common actions and behavior rules – commonly "people and their ways of working to create value." In such a chain, the first two parts should be considered as an information base of integrated processes, which is the area of responsibility for the dominant participant. The third part of the chain means the movement of information in the labyrinth between the organizational elements of the partnership.

Proper information exchange in jointly implemented processes provides a coordination mechanism for communication elements. It links elements that are “tangled” in different organizational systems and information as “islands” of data that people accumulate over time through their own experience in the successive stages of the dynamic integration capabilities development of environmental education programs. Two dimensions allow to characterize such opportunities - the proximity of relationships and dynamic relationship. Focusing on them, we further present the abstract model of business partnership in the form of a four-square matrix.

The lower left square of the matrix defines stable interactions with a small closeness of relations realized by business processes participants in materialization process of the external environment actual requests. The lower right square indicates dynamic interactions with a low degree of partners closeness whose relationships are established and terminated due to the lack of great significance in the acquisition by the dominant participant of specific assets in the region and environmental education. In these zones, we can expect a relatively low cost of implementing innovative practices. Upper left square characterizes stable interactions of business partnership participants who are familiar informally and very closely, focused on standardizing processes. The upper right square corresponds to dynamic cooperation with very close relations, highly appreciated by the partnership participants, and heightened attention to risk factors, since uncertainty becomes the rule rather than the exception. In such squares from the innovative practices can be expected of high cost, created by various participants in the integration (6,9).

The table 2 shows abstract model of business partnerships in education. The network integration forms, which were previously systematized in this study (20) by criterion "Way of integration", educational consortium, educational partnership, regional Education Center, resource training center. They are distributed to the four squares in the following way. The two of the lower squares are characterized by a relatively small degree of relations closeness, which means that the participants of a business partnership open up to each other a small part of their basic abilities and value. Conversely, the two upper squares determine the substantial closeness of the relationship, different from the usual activities in one or more of the following aspects (28).

- consumer (meet the need of new consumers or expand the range of educational programs to existing customers);
- service (intellectual property that can be offered to existing or new customers);
- scale (to distribute the educational program in large quantities or over a wider area);
- positioning (promotion of the educational program from the standpoint of better quality inherent in the participant of a business partnership higher status).

Table 2: Matrix for assessing the dynamic capabilities of integrated interactions in education

<table>
<tr><td rowspan="4">More stable development</td><td colspan="2">Closer relationship</td><td rowspan="4">More dynamic development</td></tr>
<tr><td>Educational consortium</td><td>Regional educational Centre</td></tr>
<tr><td>Educational partnership</td><td>Resource teaching Centre</td></tr>
<tr><td colspan="2">Less close relationship</td></tr>
</table>

Source: adapted by O.L. Kondratieva and M.I. Razumovskaya, R. Welbourne (14, 28)

Two right squares (interaction on the basis of regional education Al and Resource training Center, characterized by a high degree of uncertainty for the period in which innovation should be implemented quickly and on a regular basis, guided by reducing transaction costs and coordination. In periods of less uncertainty or in stable markets, a more stable relationship can occur between participants in a business partnership (educational consortium, educational partnership), indicated in the two left squares of the matrix. The development of interactions occurs in the direction from more dynamic to fewer dynamic relations (28). At the same time, for all methods of integration, be it a resource training center, educational partnership, regional educational center, educational consortium, there is a need for cost distribution, risk control, and distribution of results.

4 Conclusion

According to the research results, it can be concluded that the ability to establish partnerships in environmental education programs as soon as possible is an objective necessity, and not one's own desire, for example, of the dominant integration participant. The model choice for organizing an integrated educational process essentially depends on how much it makes sense to bear the costs of transactions and coordination independently or in partnership. So, the faster, cheaper and more productive the dominant element will be able to eliminate uncertainties in the logical chain: "people and their knowledge, experience - common actions and rules of behavior - common ways of creating value", the more innovations can be created and applied in environmental education using business partnership models. In the context of innovative practices strategic management in environmental education, this means less time and resources spent on the formation of partnership agreements, i.e. transaction costs. The interactions organization model with the participation of business partners presented above is an alternative to the evolutionary way of their development. It develops the views of Coase R., Williamson O. and their followers that the sustainable frontiers of business partnership depend not only on technology, but also on the cost dynamics and various organizational alternatives benefits.

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