

# Business Competence Formation Model in Company Based on Supply Chain Management

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**Abstract**— The article considers the problem of developing a cognitive model for the business competence formation based on supply chain management in the company. The model includes the following components: purpose, methodological approaches and principles, content, pedagogical conditions, business competence criteria and indicators. The model subject component is presented by customer as full-fledged participants of the educational process and is characterized by their dynamic unity aimed at creating subject-subject educational relationship. The pedagogical activity model in an educational organization is a single process of interaction and cooperation between company and customer, joint creative activities to form social and professional competencies contributing to the complex professional problems resolution and spiritual and moral upbringing. The purpose of the model implementation is to develop the student's personality, intellectual, emotional-volitional, communicative skills and other personal qualities such as purposefulness, responsibility, humanity, tolerance, citizenship, etc. The tasks of creating business competence are to develop their professional orientation; readiness for non-standard, creative, incl. professional solutions; self-organization skills; flexibility regarding new requirements; determination in preparation for the performance of their civic duties, familiarization with legal norms in force in society.

**Keywords**— *business competence, supply chain management, company.*

## 1. Introduction

Purpose of this paper Partners in the supply chain and their relationships may adversely impact the creation of value, delivery of goods or services; whatever are the firm's competencies and service levels [1]. Based on the concept of business competence formation based on Supply Chain Management in the process of integrating upbringing and education, we have developed a structural model for this process implementation.

Modeling is a general method of scientific research,

which is widely used in pedagogical science. Modeling is given an important place along with cognitive methods such as observation and experiment[2,3].

This method is an integrative; it allows combining empirical and theoretical in pedagogical research, i.e. to join experiment with the logical constructions and scientific abstractions during the study of a pedagogical object.

The basic concept of a modeling method is a model.

A model is an artificially created object in the form of a diagram, physical structures, symbolic forms or formulas, which, being similar to the studied object (or phenomenon), displays and reproduces in a simpler and rougher form the structure, properties, and relationships between the elements of this object [4].

We consider the model (in particular, the pedagogical) as a certain framework in which the procedural aspect of pedagogical action (upbringing, education, training or development) is enclosed. The pedagogical model consists of a number of techniques and technologies which contribute to the reconstruction of the procedural and methodological side of pedagogical action. Thus, a model is a form, a shell, within which a unified pedagogical process develops, which has its own content, methods and technologies of education and development [5].

## 2. Methods

The paper develops two frameworks showing the elements of an supply chain business model and the interconnection of those elements and dynamic capabilities. The use of these frameworks is demonstrated in a case study of Russia. In solving the tasks, the following methods were used: study, analysis and systematization of pedagogical literature, historical documents, archival materials; comparative analysis of practical and theoretical activities; system analysis, taking into account state-political, social, economic factors; generalization and systematization of the results and conclusions.

## 3. Results and Discussions

The long-established competition model 'company vs. Company' has been shifting towards a new model:

supply chain vs. Supply chain. Today, competing in markets largely depend on the capabilities and performance of partners involved in the supply chain. Cost, quality and service strategies of the firm may improve internal efficiency/responsiveness, but growth is constrained or confined to same revenue base. Because partners in the supply chain may adversely impact the creation of value, delivery of goods or services; whatever are the firm's competencies, inventory/service levels. The total supply chain may be not as good as a competitor supply chain, but the firm cannot observe that if it has only compared its node in the chain with that of its competitor.

This is often described as "competition among supply chains" rather than individual companies. Innovating firms diversify their strategic efforts towards developing supply chain competence for competitiveness and advantage. Such supply chain competence gained over competitor's supply chain would reflect in the firm's performance, competitiveness and growth in sales & profitability. This research proposes a theoretical model, 'Supply Chain Competence Framework' that will guide effective design and development of supply chain competence for gaining competitiveness, advantage and growth. Based on these theoretical principles, on the basis of system-integrative and competency-based approaches, a structural-functional model for the formation of business competence in company was developed.

This model includes the following components: goal, subjects, principles, content, pedagogical conditions, social competence criteria and indicators.

The socio-professional competence formation based on Supply Chain Management is correlated with the global goal of the educational system - the student's personality development, intellectual, emotional-volitional and such personal qualities as purposefulness, responsibility, humanity, tolerance, citizenship, etc. The tasks of creating business competence are as follows:

- assistance to customer in the cognition of themselves, their capabilities and abilities, their interests and inclinations, their professional orientation;
- communication skills development; readiness for non-standard, creative, incl. professional solutions; self-organization skills; flexibility regarding new requirements; and determination;
- preparing for the performance of civic

duties, introduction the legal norms in force in society. The model subjective component is presented by company and customer as full-fledged subjects of the educational process and is characterized by their dynamic unity, aimed at creating a subject-subject educational relationship. In this case, we are talking about the aggregate subject of the educational process. The model methodological component consisted of methodological approaches: system-integrative and competency-based and pedagogical principles of the customer business competence formation based on Supply Chain Management: dialogue; cooperation; cognitive interest development; a positive self-identity formation; interactivity.

The dialogue principle. It involves the making connections and building relationships between a teacher and a student of such a form of interpersonal interaction and the quality of relations in which the student is not an object or condition for the teacher's activities aimed at achieving teacher's goals, but an equal, free subject with own interests, values and inner peace and pursuing own goals[6].

The cooperation principle. This principle requires the organization of a set of activity, cognitive, behavioral, axiological relationships of the educational process subjects, due to mutual understanding, penetration into the inner world of each other, a joint analysis of the course and results of this activity[6].

The cognitive interest development principle. It promotes pedagogical stimulation of a student's disposition towards learning, intellectual activity, emotional upsurge, volitional aspirations, enriching the communication process, the intensity of its flow, customer social connections, strengthening collective aspirations, thereby stimulating the business competence development [7].

The positive self-identity forming principle. This principle provides the opportunity to create conditions for customer to be included in the process of self-exploration, awareness of real and ego ideal, orientation to strengths and weaknesses, reflection and feedback skills development; creation of conditions for self-actualization, self-acceptance.

The interactivity principle allows changing the teacher's traditional activity with the customer activity, when the teacher does not give ready-made knowledge, but encourages customer to independent search [8].

The content component involves the implementation in the educational process of forming the skills of constructive interaction with people, self-regulation and self-control; integration of the content of academic disciplines in mastering the culture of communication, introducing customer to new social and professional

experience, to the system of social and professional relations, the assimilation of certain norms and values, social and professional influences and relationships. The content of the integrated training programs paid special attention to the expressed social and professional context (topics “Acquaintance”, “Professional interests”, “In the new professional team”); speech patterns (thanks, apology, refusal, request); social and professional etiquette (norms of behavior in various situations), non-verbal formulas (gestures, movements, facial expressions), adequate actions with colleagues, friends, relatives, social partners (thought clear expression, direction of speech, logic, statement of purpose).

The activity-functional component should include developed and justified pedagogical conditions for the business competence formation based on Supply Chain Management in the process of organizing educational and extracurricular activities of customer:

- the development of conscious attitude and positive motivation, as well as the need to master communication as a means of business competence developing. The implementation of this condition involves the content of educational material selection which meets the customer needs and contributes to the emergence of new positions necessary for future professional activity; integrated organization of educational activities; the use of educational activity collective forms;
- analysis of customer future professional activities in the process of educational and extracurricular activities integration and the promotion on this basis of incentives which encourage more active social and professional competencies mastery. This condition presupposes the fulfillment of creative tasks with professional and imitative content at educational and extracurricular classes, analysis of social and professional situations, professional communication imitation, which helps customer to develop communication skills, readiness for future professional activities, provides an opportunity to express their opinion and express own feelings [9,10];
- enrichment of educational material with situations of social and professional interaction, which was realized through the use of topics and communication situations contributing to the formation of customer' need for social interaction;
- organization of the collective perception of educational information and cognitive activities to create an environment using work group forms

(work in pairs, mini-groups, role-playing game, business simulation), which contributed to the development of the ability to cooperate and collaborate, speech initiative, providing customer constant speech interaction [9, 10].

Pair work is considered as the most comfortable form of educational process organization, the purpose of which is the customer business interpersonal relations formation. Work in pairs forms their ability to take a common goal, share responsibilities, coordinate ways to achieve the proposed goal; correlate their actions with those of a partner; to take part in comparing the goal and the work result. This is a condition for the emergence of motivation for joint activity, a positive attitude towards it.

For business competence formation based on supply chain management, the experience of active social interaction is important. Therefore, as the next way for business competence formation based on Supply Chain Management, we consider it is important to highlight specially organized interaction between customer in order to form social skills. It is important to teach them how to make contact, organize collaboration, share responsibilities, resolve conflicts, listen to another, etc. These skills are formed in group work. For the effective business competence formation based on Supply Chain Management in the organization of such activities, it is necessary to develop algorithms for completing tasks, discuss the work rules, and analyze their implementation [11].

The interaction is organized in relation to learning situations and situations which arise in the process of extracurricular activities, but upon completion of work not only the assignment is discussed, but also the observance of the norms and rules of group work. This contributes to the meaningful implementation of the rules and requirements of the team.

Customer during the discussion make their feasible intellectual contribution to the common cause. There is an exchange of knowledge, ideas, the psychological atmosphere is changing. In the process of collective discussion, customer learn the discussion culture, communication and co-creation, to listen to each other. In micro groups, customer learn to express their point of view, respect the opinion of another, and subordinate their point of view to the opinion of others. Role-playing games and business simulations actively involve customer in the learning experiences happening within the classroom, extracurricular, and electives, stimulate the acquisition of communication experience in various social roles, allow simulating various types of activities, introduce customer to behavioral patterns, teach them to perform a social and

personal role; the creation of special situations during the socio-psychological training, summarizing the results of individual cycles of integrated classes, conducted both in classroom and in extracurricular time.

Training is necessary in order to know oneself, learn to get on track with other people and better recognize them, understand responsibility for the success of communication with others; it contributes to the formation of basic abilities of self-reflection, customer can develop auto-evaluation skills to resolve emerging conflict situations and prevent them [8].

Diagnostic-effective component includes criteria and indicators of business competence formation based on supply chain management.

Thus, by cognitive modeling means of business competence formation based on Supply Chain Management in company, the following problems are solved:

organization of a comprehensive innovative educational space;

integration of variable forms of a teacher and customer cognitive activity;

providing the conditions for the gestalt formation of the subject and tools of cognition in subjects of the educational process, etc.

The main findings of this article are attributed to the application of the paradigmatic approach based on the realization of the socio-cultural competences necessary for the personality's implementation of significant civic activity predicated on various behavioral scenarios.

#### 4. Conclusions

This research paper proposes, "Supply Chain Competence Framework" and associated maturity model. The paper combines both resource-based and relational views and extends to strategic view (i.e., competitive dimensions) and customer-centric view (market requirements) for a firm to develop effective supply chain competence. Accordingly, the implementation of the goal of business competence effective formation of using modern digital technologies can build virtual cognitive models. The basis of cognitive models is mathematical objective laws, presented in the form of the algorithms system with direct and feedback connections. The modeling is based on the self-development of company cognition internal tools, the ability to independently construct and modify the database of their own

knowledge through gnostical external and internal tools, to be well-versed in the information space, to develop analytical, logical, critical, creative, as well as algorithmic thinking. In the cognitive modeling process, the company type of thinking changes qualitatively: rising from the concrete to the abstract and then the theoretical-research type, which contributes to the formation of adaptive, flexible and quick responses to rapidly changing conditions of professional activity and everyday life.

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