



«Educational company» (Technology): Peculiarities of its implementation in the system of professional education

«Empresa educativa» (Tecnología): Peculiaridades de su implementación en el sistema de educación profesional

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Contents

- [1. Introduction](#)
 - [2. Research methods](#)
 - [3. Research results](#)
 - [4. Discussion](#)
 - [5. Conclusion](#)
- [Acknowledgements](#)
- [References](#)

ABSTRACT:

Introduction. A competitive specialist's characteristics and requirements for his/her qualification level underlie the authors' Generalized Model of a Specialist. Its fundamentals are the specialist's personality traits, along with special knowledge, skills and abilities which correspond with the general and professional components of the Federal State Educational Standard and are formed in the three directions (socialization, adaptiveness to the labour market and professionally important qualities). *Research methods.* The study implies a new imitation method "Educational Company", which is regarded as a system of imitation methods. It has all necessary methodological characteristics and provides the teacher with a range of possibilities, which help him/her to organize the pedagogical process, formulate pedagogical tasks and fulfill them. *Research results.* The authors propose an algorithm underlying their imitation method "Educational Company", which

RESUMEN:

Introducción. Las características y los requisitos de un especialista competitivo para su nivel de cualificación subyacen al Modelo Generalizado de un especialista. Sus fundamentos son los rasgos de personalidad del especialista, junto con conocimientos especiales, habilidades y habilidades que corresponden con los componentes generales y profesionales del Estándar Educativo del Estado Federal y se forman en las tres direcciones (socialización, adaptabilidad al mercado laboral y cualidades profesionales importantes) . *Métodos de investigación.* El estudio implica un nuevo método de imitación "Compañía educativa", que se considera como un sistema de métodos de imitación. Tiene todas las características metodológicas necesarias y brinda al docente una gama de posibilidades que lo ayudan a organizar el proceso pedagógico, formular tareas pedagógicas y cumplirlas. *Resultados de la investigación.* Los autores proponen un algoritmo que

includes the following stages: the creation of "Educational Company" (its presentation and environment analysis); the performance of "Educational Company" (recruitment, activity control, partner relations establishment); the formation of an automatized workplace. A significant progress in experimental groups shows that the proposed system improves the students' professional skills and abilities, along with their personality traits. *Discussion.* It is concluded that in order to train a competitive specialist, a teacher of secondary professional school should give priority to the active teaching methods oriented to improve the students' cognitive activity, to reveal and develop their creative potential and other positive qualities. Such methods also provide for solution of important educational-organizational tasks. *Conclusion.* The revealed practical peculiarities of the imitation methods make it possible to realize the components of Competitive Specialist Model; to reveal the teacher's self-development potential in the chosen profession; to apply the system of imitation methods through the new teaching method "Educational Company".

Keywords: future specialist, quality of professional training, methods of professional training.

subyace a su método de imitación "Empresa educativa", que incluye las siguientes etapas: la creación de la "Empresa educativa" (su presentación y análisis del entorno); el desempeño de "Educational Company" (reclutamiento, control de actividades, establecimiento de relaciones con socios); la formación de un lugar de trabajo automatizado. Un progreso significativo en grupos experimentales muestra que el sistema propuesto mejora las habilidades y habilidades profesionales de los estudiantes, junto con sus rasgos de personalidad. *Discusión.* Se concluye que para formar un especialista competitivo, un profesor de escuela secundaria profesional debe dar prioridad a los métodos de enseñanza activos orientados a mejorar la actividad cognitiva de los estudiantes, a revelar y desarrollar su potencial creativo y otras cualidades positivas. Tales métodos también proporcionan la solución de tareas educativas-organizativas importantes. *Conclusión.* Las peculiaridades prácticas reveladas de los métodos de imitación permiten realizar los componentes del Modelo de Especialista Competitivo; revelar el potencial de autodesarrollo del docente en la profesión elegida; aplicar el sistema de métodos de imitación a través del nuevo método de enseñanza "Empresa educativa".

Palabras clave: futuro especialista, calidad de la formación profesional, métodos de formación profesional.

1. Introduction

Modern professional education aims to train practice-oriented specialists. In accordance with the peculiarities of the modern stage and prospects of economy and social sphere, competitive specialists are in higher demand. There are changes in their role and functions, as well as in the requirements for their competence, effectiveness and technological culture. To have a good job, a person who graduated from an institution of professional education (IPE) should adapt **to the labour market**, which is characterized by the following factors: sharp decrease in demand for poor-qualified employees; emergence of highly-skilled staff groups; fewer production workers and more personnel members involved in designing or marketing; greater demand for people who know computer programmes, etc. Therefore, there are some **new qualities** that the society would like to see in a competitive specialist: a high professional level, flexible thinking and high professional mobility, constant professional growth and self-improvement, professional competence and the ability to develop his/her own strategy and tactics of professional activity (Sergeyeva, 2015).

To satisfy the requirements of the free-market economy in the competitive world, an IPE should provide its specialists with good training. The main assessment criterion is knowledge (its profoundness, systematic character, order, efficiency, flexibility, concreteness and abstractness). The competitive ability of educational services is influenced (Sirotyuk & Sergeyeva, 2011) by *exterior factors* (competitiveness of a country, a sector, a region, etc.) and *interior ones* (rationality of colleges' and technical schools' organizational and management structures; teachers' skillfulness; available material and technical resources, and so on).

The analysis of the notions "competition" and "competitiveness" allows us to single out four groups of qualities characterizing a competitive specialist (Sergeyeva & Korzhuyev, 2015): technical (speciality and professional focus), economic (training expenses), social-organizational (social structure of consumers), personal (psychological, mental, behavioral). A competitive specialist ought to have professional knowledge, skills and abilities, a capacity to understand a situation and a certain level of cultural development. He/she should also be able and eager to study, self-develop, etc. To increase one's individual competitiveness, psychologists recommend giving a particular attention to the main psychological condition for successful activity in any

field – self-confidence. Nowadays, when unemployment risks are considerable, this advice seems very appropriate.

A competitive specialist's characteristics and requirements for his/her qualification level underlie the authors' **Generalized Model of a Specialist**. Its fundamentals are the specialist's personality traits, along with special knowledge, skills and abilities, which correspond with the general and professional components of the Federal State Educational Standard and are formed in the three directions (socialization, adaptiveness to the labour market and professionally important qualities). The development technology for a generalized model of a middle-level specialist requires to design the constituents of his/her professional activity (its analysis, the detection of principal labour functions and professional abilities) and the constituents of his/her training (the creation of systematized practical tasks helping to master the required abilities, educational programmes' correction, the development of forms and methods, etc.). The authors elaborated generalized models for such specialities as "Management", "Economics and Accountancy (in different fields)" and "Social work". Teachers and methodologists continue their search for methods that should improve the educational process, but there are no universal ways to do it... This process needs various methods, and their choice is determined by certain **pedagogical conditions**, which we divided into three groups (Korzhujev & Sergejeva, 2015): *organizational* (a lesson's didactic aim; a level of motivation for studying; peculiarities of teaching concrete academic disciplines, etc.); *substantive* (the content of teaching material, its volume and complexity, a lesson's type and structure, etc.); *psychological* (students' mental and emotional readiness, their age-related and individual peculiarities, gender and social differences; relationship between the teacher and students, and so on). Considering the mentioned pedagogical conditions, the teacher makes an independent decision about a teaching method and the development of his/her own educational technology.

The relevance of the study is seen in the necessity to train new-type specialists, who are characterized by "economic" mind, mobility, professional efficiency, decisiveness, collaborative skills. Besides, they should feel responsible for the destiny of their country, its future prosperity. In this article we propose a teaching technology "Educational Company". **The aim** is to reveal the peculiarities of its realization while training a competitive specialist within the system of professional education. This person has to be in demand at labour market and satisfy the requirements of the free-market economy. The study showed the effectiveness of the authors' technology "Educational Company" when it is needed to reveal the correlation between an IPE graduate's level and economic imperatives. The authors' **material** may be contributory to IPE teachers, parents and methodologists who use the proposed methods for the graduates' adaptation and socialization in rapidly changing social-economic conditions.

2. Research methods

Mass development and use of teaching technologies began in Europe and the USA in the 1960s – 1970s. It happened mostly due to the works of American education psychologist Benjamin Bloom (Bloom & Krathwohl, 1956). F. Percival and H. A. Ellington point out that the term "technology in education" indicates any possible means of providing people with information (Percival & Ellington, 1984). So technologies in education are represented by different audiovisual equipment: television, image projectors, etc.

Many foreign researchers distinguish 4 positions of scientific interpretation and implementation of the term "pedagogical technology":

- pedagogical technologies as A MEANS, i.e. as production and application of methodological tools, instruments, educational equipment and technical means in the teaching process (Spaulding, 1978; Gray & Herr, 2000);
- pedagogical technologies as A METHOD, i.e. as a communication process (method, model, technique of solving educational tasks) based on a certain algorithm, programme or system which should improve the relationship between the participants of pedagogical process (Silber,

1972; Sakamoto, 1974);

- pedagogical technologies as A RESEARCH AREA, i.e. as a vast field of knowledge resting upon the data which are obtained and used in social, managerial and natural sciences (Gray & Herr, 1998; Seyfried, Kohlmeyer & Furth-Riedesser, 2000);

- pedagogical technologies as A MULTIDIMENSIONAL NOTION, i.e. as a **many-dimensional process** needing a multiple-aspect approach. (Mitchell, 1978; Hug, 1985).

D. Finn noted that it is very naïve to regard a technology as only a complex of different equipment and teaching materials. It is much more than that – an organizational method, a way of thinking about materials, people, institutions, models and systems requiring the cooperation of vivo and techno.

Having analyzed more than 100 sources related to the studied definition, P. D. Mitchell concluded that the pedagogical technology is a practical and theoretical education area linked with all the aspects of pedagogical systems' organization. He also indicated that the mentioned technology is connected with resource distribution – a procedure aiming to achieve specific and potentially reproducible results (Mitchell, 1978).

UNESCO proposes a wide approach – pedagogical technologies. This is a systematic method helping to plan, use and assess the whole teaching-and-learning process by considering human and technical resources (including their cooperation). The aim is a more effective education form.

Commenting on pedagogical technology, A. S. Makarenko sent a warning to his colleagues: "Theoretically, we, teachers, went up very high, but we were very low in a practical way. We thought that we were providing a child with good qualification, but in reality it was only good enough to make a bad stool... I remember my admiring these *bad stools* as a young teacher. But later I got rid of this pedagogical stereotype" (Lomakina, Korzhuyev & Sergeyeva, 2011).

The educational services' market is actively developing, which stimulates the institutions to revise their approach to professional training. It is essential to propose new teaching methods and modes, to create new organizational forms of pedagogical activity.

As ways of helping teachers and students to work together, educational methods should provide future specialists with skills, abilities and moral development. An IPE teacher should resort to methods that would "shape" highly qualified workers – competitive ones. This may be achieved by active educational methods, which are classified according to their focus. If it is needed to create a system of knowledge, a teacher should use imitation methods: a lecture presenting a challenging issue, heuristic conversation, educational discussion, research laboratory work, etc. If the goal is to form skills and abilities, game methods are required, such as imitation of simulator-based activity, role-playing, business game, moderation, and so on.

The comparative analysis of imitation methods' implementation revealed their advantages and disadvantages. For example, the analysis of specific situations presupposes a joint management decision, which stimulates the development of behavioral traits, including communicative skills. In our study this method was used at the lessons dedicated to the topic "Decision-making in Management". Future specialists examined interdisciplinary ties between Marketing, Organization of Activity Areas, Records Management and Accountancy. *Situational production tasks* became a challenge for students at Personnel Management lessons. So working with the topic "Sources and ways of recruitment" bettered their professional qualities, which are necessary to resolve specific managerial situations, systematized their theoretical knowledge and improved the young people's communication skills, along with the ability to direct and to submit. Instructed actions-exercises are particularly effective within the academic discipline "Automatized Systems for Processing of Economic Information", since it aims: 1) to master the skills and abilities needed for work with "Excel" electronic tables and "Access" data bases; 2) to consolidate the results achieved by working with electronic tables (principal methods); 3) to cultivate carefulness, self-reliance, etc. While establishing an automatized accountant's position, the teacher *imitated professional activity via simulators* using universal computer

| No. | Stages | Pedagogical goals | Imitation methods of teaching |
|--|---------------------------------------|---|---|
| 1. Creation of "Educational Company" | | | |
| 11 | Presentation of "Educational Company" | a) The choice of activity type, the title "Educational Company", the logo, the motto | Role-playing. |
| | | b) To design the company's organizational structure and manning table. | Fulfillment of individual tasks |
| | | c) To make and confirm the employees' duty regulations, to study the registration procedure and the document custody. | Instructed actions-exercises. |
| 12 | Environment analysis | a) To analyze the goods' demand and supply | Analysis of specific situations. Fulfillment of situational tasks. |
| | | b) To examine the competitive advantages, to study the environment via SWOT method. | Instructed actions-exercises. Fulfillment of situational tasks. |
| 2. Performance of "Educational Company" | | | |
| 21 | Recruitment | a) To execute staff orders in conformity with applications from Educational Company's employees. | Instructed actions-exercises. |
| | | b) To fill in work records, to sign contracts with Educational Company's employees, to establish a probation period. | Imitation of simulator-based activity. |
| 22 | Control of professional activity | a) To check whether the employee's activity conform to his/her duty regulations. | Fulfillment of individual tasks. |
| | | b) To certificate and rotate the personnel. | Case method. Instructed actions-exercises. |
| 23 | Establishment of partner relations | a) To assign to business trips (the order of Educational Company's Director, the completion of credentials). | Role-playing. |
| | | b) To calculate and pay the travel allowance. | Instructed actions-exercises. |
| | | c) To sign delivery treaties. | Imitation of simulator-based activity. |

| | | | |
|--|----------------|--|--|
| | | d) To make expense reports on business trips. | Instructed actions-exercises. |
| 3. Creation of Automatized Workplace (AW) | | | |
| 31 | AW: Accountant | To solve an accountancy major task by using computer programmes "1C: Accountancy" and "Info-Accountant". | Instructed actions-exercises. Imitation of simulator-based activity. Business games. |
| 32 | AW: Manager | To create a computer presentation of Educational Company in PowerPoint. | Business game. Moderation. Instructed actions-exercises. |

Therefore, our educational and educational-methodological materials, which are oriented to various imitation methods of teaching, allowed us to reveal **the peculiarities of imitation methods' implementation** within a middle-level specialist training. These special features make it possible:

- to realize the components of Middle-level Competitive Specialist Model: students' professional characteristics corresponding with the Federal State Educational Standard on the concrete speciality and the young people's personal qualities – psychological, mental, behavioral;
- to reveal the teacher's self-development potential in the chosen profession (Sergeyev & Sergeyeva, 2010; Sergeyeva, 2015);
- to apply the system of imitation methods through the new teaching method "Educational Company".

In order to determine how efficient the imitation methods are in the given context, we calculated **the Generalized Indicator of Specialists Training Quality**. It includes the generalized coefficient of theoretical professional training and the generalized coefficient of practical professional training, along with changes in the students' personality traits. To calculate the generalized coefficient of theoretical professional training, the students were proposed a computer test with 400 questions on major academic disciplines: Accountancy, Analysis of Financial and Economic Activity, Management, Auditing, Taxes and Taxation – for the speciality "Economics and Accountancy (in different fields)"; Analysis of Financial and Economic Activity, Management, Marketing, Personnel Management, Strategic Management – for the speciality "Management". According to the test results, the generalized coefficient of theoretical professional training was 4.00 in the experimental groups and 3.99 in the control groups. It proves that the experiment had started on equal grounds for all students.

The experiment's accuracy was also proved by the psychological tests designed by A. S. Prutchenkov that focused on the assessment of students' personality traits ("Self-control skills", "Behavioral peculiarities in conflict situations", "Communicative and organizational abilities").

At the *forming stage*, the teaching process in the experimental groups was based on the method "Educational Company", while the control groups followed the standard schedule.

The *control stage* involved a computer test aimed to determine the generalized coefficient of theoretical professional training, which increased by 2.5 % and 5.0 % respectively in the control and experimental groups.

The *generalized coefficient of practical professional training* includes a set of tasks fulfilled within a certain period, and such criteria as quality and operativeness. The last two constituents were assessed during an interdisciplinary business game, which corresponds with the chosen speciality. The analysis of the business games' results in the experimental groups revealed that the number of fulfilled tasks, the quality indicator, the operativeness indicator and the generalized coefficient of practical professional training increased respectively by 7.6 %, 14.5 %, 7.7 % and 9.7 %.

This rise in quantity and quality shows that our system of imitation methods improves

professional skills and abilities, along with the students' personality traits. The increase in operativeness, in its turn, indicates the formation of high reaction rate (as a personal characteristic) and operativeness itself (as a trait relating to the quality of knowledge). Therefore, *the Generalized Indicator of Specialists Training Quality* in the experimental groups exceeded that in control groups by 6.2 %.

4. Discussion

The conducted research confirms the efficiency of imitation methods when it is required to train a competitive specialist. We came to the following conclusions:

Professional education is experiencing a strong influence of the modern economic situation, which affects the labour market **characteristics** (sharp decrease in demand for poor-qualified employees; emergence of highly-skilled staff groups; fewer production workers and more personnel members involved in designing or marketing, etc.). Therefore, there are some **new qualities** that the society would like to see in a competitive specialist: high qualification in the major aspects of his/her speciality, advanced professional skills, professional mobility, and so on.

To satisfy the requirements of the free-market economy in the competitive world, the society has to focus on ***the Generalized Model of a Competitive Specialist***. Such model considers *exterior factors* (competitiveness of a country, a sector, a region, etc.) and *interior ones* (rationality of colleges' and technical schools' organizational and management structures; teachers' skillfulness; available material and technical resources, and so on). It also includes different qualities characterizing a competitive specialist: technical (speciality and professional focus), economic (training expenses), social-organizational (social structure of consumers), personal (psychological, mental, behavioral) and substantive (special knowledge, skills and abilities formed in three directions: specialization, adaptiveness to the labour market and professionally important qualities).

The model's design *technology* includes the formation of professional activity components (analysis of professional activity, detection of main labour functions and professional skills) and specialist training components (creation of basic tasks and exercises, curriculum correction, development of teaching forms and methods, etc.).

Having analyzed several classifications of teaching methods (on such grounds as a knowledge source, a didactic aim, a type of cognitive activity, etc.), we concluded that in order to train a competitive specialist, the teacher should give priority to the ***active teaching methods*** oriented to improve the students' cognitive activity, to reveal and develop their creative potential and other positive qualities. Such methods also provide for simultaneous solution of three educational-organizational tasks, which are the following: to bring the educational process under the teacher's control; to achieve all students' active participation in this process; to conduct regular assessments of the future specialists' results and self-confidence.

5. Conclusion

When choosing educational methods, the teacher should consider the following: the content, type and complexity of the material, the aim of the lesson, the students' knowledge level, and so on. This choice is determined by certain **pedagogical conditions**, which we divided into three groups: *organizational* (a lesson's didactic aim; a level of motivation for studying; peculiarities of teaching concrete academic disciplines, etc.); *substantive* (the content of teaching material, its volume and complexity, a lesson's type and structure, etc.); *psychological* (the students' mental and emotional readiness, their age-related and individual peculiarities, gender and social differences; relationship between the teacher and students, and so on).

According to the study's results, the teacher's choice of pedagogical methods is influenced by his/her pedagogical skills. The mechanism of the Pedagogical Mastership Model Formation includes **the pedagogical mastership's constituents** (*professional* – deep knowledge in the

research area, speciality, professional school didactics, etc.; *special* – ability to set pedagogical goals and determine educational tasks, to make students more interested in their subject, etc.; *moral* – honesty, decency, adherence to principles, modesty and unpretentiousness, etc.; *motivational* – determination, social activity, sense of responsibility, and so on); **the factors of pedagogical mastership's development** (social demands imposed on the professional education by the society; the level of contemporary science; teachers' professional skills and abilities; their pedagogical position and creative potential, etc.); **the criteria of pedagogical mastership's assessment** (relevance and prospects, novelty, productivity and effectiveness, conformity with the fundamentals of pedagogy and methodology, stability, creativeness, and so on).

In our study we developed a data bank of available teaching methods, an expert service system, methods facilitating advisory assistance and pedagogical cooperation. Besides, we proposed *an algorithm of the teacher's activity on the design and usage of imitation educational methods*. It aims to assess the students' psychological readiness for imitation methods, to help them interpret their experience, to form new ideas systematically, by stages.

When highly-qualified and competitive workers are required, the imitation methods are more prospective than other active ones. The **practical peculiarities** of the imitation methods make it possible:

- to realize the components of Middle-level Competitive Specialist Model: students' professional characteristics corresponding with the Federal State Educational Standard on the concrete speciality and the young people's personal qualities – psychological, mental, behavioral;
- to reveal the teacher's self-development potential in the chosen profession;
- to apply the system of imitation methods through the new teaching method "Educational Company".

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[Índice]

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