ИКОНОМИЧЕСКИ ИЗСЛЕДВАНИЯ
ECONOMIC STUDIES

Volume 31 (2), 2022

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ECONOMIC ASPECTS OF TRANSFER OF EDUCATIONAL TECHNOLOGIES AT CONTEXT OF APPROPRIATION OF INTELLECTUAL PRODUCT[5]

Results of research of specific of transfer of educational technologies as a demonstration of them appropriation as of intellectual product was represented in the article. The looks of Ukrainian and foreign scientists on the place of educational technologies in the composition of intellectual capital was analysed. The motives of appropriation of the intellectual product as factors of the mechanism of governance of transfer of educational technologies were defined. On a functional level, this mechanism formalises motives of creation of an environment of transfer of educational technologies for a partnership of all interested sides was discovered. Directions of transfer of educational technologies obtained actualisation on the basis of analysis of the marked motives. Composition of subjects of transfer of educational technologies per their roles as seller, legislator (government authorised organs), technological broker, buyer, was concretised. The contradiction of priorities among economic interests, motives and actions at a combination of roles within one subject was revealed. The factors of external appropriation of the intellectual product by subjects on the stages of "preparation – legitimation – restriction" were found out. The common and distinctive traits of the stages of "preparation – legitimation – restriction" were found. The basic criteria of transfer of educational technologies on the stages of preparation, legitimation and restriction were proposed. The criteria of institutionalisation of external interactions of subjects of the transfer of educational technologies were

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[5] This paper should be cited as: *Leonidov, I. L., Kovalchuk, D. K., Lebedeva, V. K., Tarasevich, V. N. (2022). Economic Aspects of Transfer of Educational Technologies at Context of Appropriation of Intellectual Product. – Economic Studies (Ikonomicheski Izsledvania), 31 (2), pp. 157-172.*

formalised. Updating of an educational network, including the use of open platforms of informatively-communication technologies and cloudy servers, was proposed. Actual directions of further researches of transfer of educational technologies, methodologies of determination of their market prices with the use of modern ICT, development of the special economic-mathematical models of such estimation was delineated.
Keywords: intellectual product; ownership and appropriation of intellectual product; infrastructure of transfer of educational technologies; informatively-computer technologies
JEL: B41; D11; D23; I25; J24; O34; P26

1. Introduction

Formulation of the problem

The changes that take place in the educational process of the professionally-oriented tuition of specialists under acts of pandemics of COVID-19 and the role of educational technologies are undeniable facts. Questions of appropriation of intellectual product in the sphere of its transfer as a transition of the full or limited ownership rights on the educational technologies have actualisation in the conditions of distribution of the remote forms and electronic facilities of tuition. Into this connection, the problem of the transfer of educational technologies has appeared before the government organs of regulation of education for countries majority in the context of efficiency of the educational process and professionally-oriented tuition of specialists for a budgetary sphere and business, what able to provide the competitiveness of national economy on the global markets of hi-tech commodities, as results of modern informatively-technological revolution (ITR). It found a reflection in national scientific literature as research of traditions of rigid «attachment» of educational technologies and their transfer to the efficiency of financing of scientifically-research and educational organisations of Ukraine. Addition of these traditions, the researches of such stimulus of creative activity of participants of the educational process, as an appropriation of the intellectual product (Tarasevich, 2017), will promote integration in the educational process the tuition, scientific and innovative activity, in particular, with the use of informatively-computer technologies (ICT).

The problem of «innovation-tradition» in the professionally-oriented tuition of specialists is differently perceived in scientific circles in connection with the process of differentiation of network of appropriation of an intellectual product and her visualisation in the transfer of educational technologies. Such theoretical questions, as the connection between the network of appropriation of educational technologies and infrastructure of their transfer, and also possibilities of governance of transfer of educational technologies into forming the developed potential of innovative educational technologies is remaining debatable.

Analysis of the latest research and publications

Increase of interest of specialists to the range of problems of informative economy in all (Jochimsen, 1996; Rosenstein-Rodan, 1961; Hirschmann, 1967; Chernyavskij, 1979; Simonis, 1972) took place an across the research of influence of her becoming on the

introduction of corresponding educational innovations, including, new educational technologies (Shkarlet, 2019; Arutyunova, 2010; Vul'fson, 1999; Zadorozhnaya, 2012; Delmon, 2010; Ford, 1991). The catalyst of this process can become the transfer of educational technologies. But for today, research in the branch of transfer of technologies, as a rule, is limited to the sphere of material production of commodities and services (Grosse, 1996), not touching spheres of education. Together with the same, distribution of the remote forms of tuition and other electronic means of studies more and more is put a question of appropriation of intellectual product at this sphere, infrastructures of his transfer as delivers of full or limited ownership rights on educational technologies, de facto the exchange technologies. For today educational technologies conceptually did not get the worthy place and as a part of the intellectual capital (Maslak, 2019). By defined step on a way of solving of these problems is possible to consider results of the researches lighted up in works (Tarasevich, 2019; Drach, 2018), where are defined the general features of intellectually-informative commodity, was developed the approaches (including, multicriteria) to the determination of its cost and market price. Analogical approaches can be used and for the estimation of educational technologies in the process of their transfer. The hypotheses about stimulation on the basis of a transfer of educational technologies of the growing markets were promoted (Mate, 2020). But this anticipation, as a rule, has a declarative character which demands more detailed research of infrastructure of a transfer of educational technologies as a component of the network of appropriation of intellectually-informative products in general.

Formulating the goals of the article

Elaboration of the mechanism of governance of transfer of educational technologies and detection of economic interests, motives and actions of his subjects.

2. Theoretical Bases of the Research

In theoretical-methodological measurement, the network of appropriation of educational technologies how intellectual products can be concretised in forms of the infrastructure of their transfer. Educational technology as the intellectual product is the mode of realisation of the educational process via its partition into the system of sequentially and interconnected stages, procedures and operations, which was directed on achievement of the educational aims (Kurljand, 2007). The different traditional technologies of tuition, namely, technologies of the developing tuition, technologies of design tuition, the technology of adaptive tuition, dual technology of tuition and others, are used in educational practice. Authors understand a transfer of educational technologies as a transaction of educational technology from belonging to one subject in the acquisition of another subject. Transactions with educational technologies are generating a special network of appropriation of educational technologies, which was self-organised. In this sense, the infrastructure of transfer of educational technologies is a set of legal, institutional, communication, etc., facilities which provide the reproduction of the transfer of educational technologies. Accordingly, the governance of a transfer of educational technologies is revealed as fixing by the owner of innovative

educational technologies of rules and prognostic conditions of their use for their maximum realisation in the sphere of education via the transfer.

Into relations between the subjects of transfer of educational technologies about the appropriation of the last was concerning not only the known theses about the magic of ownership, what "converts sand into gold", about different forms, subjects and objects of appropriation, not only a linear motion of educational technologies in the direction from a developer to an end-user, but also located the basic functions (roles) of subjects: developer, producer, mediator, consumer. The various functions of the subject represent the differentiation of transfer of educational technologies in a corresponding infrastructure. Thus, in the infrastructure of transfer of educational technologies, the function of subjects are specified per economic roles, namely: seller, legislator (government authorised organs), technological broker, buyer.

Consumers or customers of educational technologies realise the economic role of the buyer, for example, establishments of higher education, National academy of pedagogical sciences of Ukraine. In the practice of economy, the action of the consumer is connected with the dematerialisation of the substantiated intellectual product, or visual-hearing the acquiring of a non-material intellectual product. The consumer is ordering, acquiring or using the materialised forms of intellectual product for satisfaction as the personal, family, house and other needs (personal consumption), so and for the business activity (production-consumption). Such consumer is invocatory to the adaptation of innovations on the production or in the life in conditions of use of materialised of intellectual product.

Institutional subjects of purchase, transfer and/or use of the educational technologies are realising an economic role of legislator, for example, the government represented by the Ministry of Education and Science of Ukraine, the central and municipal organs of executive power, organs of municipal self-government. The legislature is able to update the legal form of an authorial copy of the seller via legitimation of intellectual product. Respectively, the legislator how the actor of belonging of the legal form of the materialised of the intellectual product has actualisation of it via the signing of the contract of realisation of a legal form of intellectual product.

Technological brokers appropriate the incomes per mediatorial functions between sellers and buyers. In economic practice, the technological broker is subject of acquisition which aims to encompass the contract of buying-sale of the legal form of intellectual product. Respectively, the technological broker as subject of belonging of mediately-humanised intellectual product has an ability to actualise it via the signing of the contract of buying-sale of the legal form of intellectual product.

Developers or performers of educational technologies, or a furnisher of technical services are realising the economic role of the seller, for example, the scientists and their labour collectives. However, in economic practice, the seller is demonstrating how the subject of acquiring, which aimed to encompass the materialised intellectual product in the form of authorial copy. Respectively, the seller how the subject of belonging of the materialised intellectual product has an ability to the actualisation of it via the signing of the contract of the publishing (legalisation) of the authorial copy of the intellectual product.

Fixing the marked economic roles per the subjects of transfer of educational technologies is not a constant and may change at the measure of the presence of conflicts of their economic interests, motives and actions. Together with it, if a concentration of economic roles in one subject took place, then was increased the indeterminacy of priorities of his economic interests, motives and actions. One of the variants of decrease of this indeterminacy may be a ranking per importances of those economic roles, what a combined into itself by any subject. Admitted importances of role for the subject will result in equivalent to the priority of him economic interests, motives and actions. Say, if the legislator of transfer of educational technologies is simultaneously by their buyer and technological broker, by priority of him economic interests there will be an appropriation of income from the realisation of such product, and among motives will outweigh the pragmatic. In a situation, when the buyer of educational technologies, the technological broker and the legislator are different subjects, each of them will have own interests, motives and actions (Table 1).

Table 1

Comparison of economic interests, motives and actions of subjects of transfer of educational technologies

Subjects	Economic interests	Motives	Actions
seller	increment of intellectual essence forces; income from realisation authorial to the copy of intellectual product or wages	receipt quality of new intellectual product	presentation to authorial the copy
legislator (government authorised organs)	income from the creation of forms of the materialisation of intellectual product	legalisation of the materialisation of intellectual product	given of legal protect of the materialisation of intellectual product
technological broker	profit or income is from the realisation of forms of the materialisation of intellectual product	distribution of innovations as legalisation forms of materialising of intellectual product	realisation of legalisation forms of the materialisation of intellectual product
buyer	utility from the use of legalisation forms of the materialisation of intellectual product	satisfaction of needs at the forms of the materialisation of intellectual product	use of legalisation forms of the materialisation of intellectual product

Source: developed by the author.

In the most abstract view in the infrastructure of transfer of educational technologies the functional (***F***) of the interaction of their subjects, – seller (A_{SL}), legislator (A_{LW}), technological broker (A_{BT}), buyer (A_{BR}), – able be presented as (author's vision):

$$F = f(A_{SL}, A_{LW}, A_{BT}, A_{BR}), \quad (1)$$

The delineated abstractions of the functional are formalised into the infrastructure of transfer of educational technologies on the stages of external interaction with his subjects. The initial moment of external interaction of subjects of transfer of educational technologies is the stage of preparation to such interaction (**P**), what characterised by semantic-neos designing of educational technologies by the seller and formalisation of legal conditions of materialisation of these technologies by the producer in the conditions of mainly planned transaction of technologies (Table 2) from belonging of seller to the acquisition of producer. Such

translation is directed at the vector of «emanation of new-open – dissemination publicly of known», via presentation semantics-neos of educational technologies from the borders of functioning of buyers (A_{SL}) to the legislator (A_{LW}), what formalised, as (author's interpretation):

$$P = f(A_{SL}, A_{LW}), \quad (2)$$

Table 2

Characteristics of product-subject changes at the transfer of educational technologies

Stages	Change subject	Changes product
preparations	irrevocability	multichoice
legitimation	reflexive	limitedness
restriction	iteration	wearing

Source: developed by the author.

The signs of the stage of legitimation (**L**) are givens of the legislator ($\mathbf{A_{LW}}$) of legal protection to educational technologies and contract conduction of distribution of such technologies by a technological broker ($\mathbf{A_{BT}}$) for the commodity or planned (see a table. 2) transmission of technologies from belonging of legislator in the acquisition of technological broker. Such translation gravitates between poles «subjective reality – objective reality» as given of legislator of the right-protected educational technologies to the technological broker and formalised, as (author's interpretation):

$$L = f(A_{LW}, A_{BT}), \quad (3)$$

In the legitimation, the interaction of subjects of transfer of educational technologies concerning the increase of materialisation and humanise of essential the human forces, and in preparation is an increase of humanising of essential the human forces, directly and indirectly, are objectified.

The defining line of a stage of a regulation (**R**) is the order of sale by the technological broker and payments by the buyer of the rights for educational technologies as dominants of commodity transfer of these technologies from belonging of the technological broker in the acquisition of the buyer (look tab. 2). This transfer in a range «efficiency – equitable» appears as an order of a transfer of human rights educational technologies from the technological broker ($\mathbf{A_{BT}}$) to the buyer ($\mathbf{A_{BR}}$), which is formalised as (author's interpretation):

$$R = f(A_{BT}, A_{BR}), \quad (4)$$

Thus, in the infrastructure of transfer of educational technologies the functional (**Fi**) of external interactions of subjects of transfer on the stages of preparation (**Pi**), legitimation (**Li**) and restriction (**Ri**) it maybe to formalise the next system (author's vision):

$$Fi = \begin{cases} P = f(A_{SL}, A_{LW}), \\ L = f(A_{LW}, A_{BT}), \\ R = f(A_{BT}, A_{BR}), \end{cases} \quad (5)$$

Optimisation of the system provides her aspiration on the effective functioning of the infrastructure of transfer of educational technologies, him corresponding interaction of subjects of the transfer of educational technologies on the stages of preparation to interaction (in relation to the institutions of education, research institutes and laboratories), legitimation (in relation to the government organs of governance) and regulation (in relation the institutions of education, the enterprises and indirectly – the population).

Formalisation of governance of infrastructure of a transfer of educational technologies (at the level of actions for external optimisation and interactions of subjects of a transfer of educational technologies – «***Pp***») able to presented (author's vision) by the next expression:

$$\boldsymbol{Pp = <Pi; Li; Ri>,} \quad (6)$$

The governance of infrastructure of a transfer of educational technologies provides, what institutions the higher educations not only act as creators of an intellectual product, but also distribute new knowledge and technologies, tuition specialists able to use them, and also are key mediators between researchers and consumers of innovations, carrying out an exchange of knowledge (as conferences, seminars and so forth), thus, with use of modern ICT.

3. Methods of the Research

Into research of our scientific problem was estimated the relevance of a set of traditional scientific methods. Author's grouping of this set per by the criteria of the sphere of use (Ms1 – general scientific, specific), of methodological base (Ms2 – empiricism, pragmatism, deductive, conventionalism), of domination in theoretical concepts (Ms3 – methods of descriptive, causal, functional), of science ontology (Ms4 – methods of formal logic, the dialectics, dialectics-materialistic, synergetic) was applied. The proposed groups of methods definitely corresponded to the own historical conditions of research – Ch1, Ch2, Ch3, Ch4, was ascertained. However, in the conditions of the XXI century (Nch), the proposed groups of methods were represented research stage, when its object appears before the subject in the most abstracted look (author's interpretation):

$$\boldsymbol{Ms1/Ch1 + Ms2/Ch2 + Ms3/Ch3 + Ms4/Ch4 = Ap^{Ms}/Nch,} \quad (7)$$

Accordingly, each component of the left part of the equation have appears as a method, which is inadequate to the nature of the researched object. This equation was solved for the search of Ap^{Ms} as a method of the research of a scientific problem, what adequate to modern conditions of research of appropriation of an intellectual product and transfer of educational technologies.

The results, obtained by applying the integration method, are as follows: dialectical method – at the opening of the motive role of contradictions in the evolution of appropriation of the intellectual product; modelling – at logical generalisation and specification of external interactions of subjects of transfer of educational technologies; praxiological approach – at the analysis of infrastructure of transfer of educational technologies as to the fragment of human activity; system method – at the exposure of building and structure of governance of educational technologies a transfer.

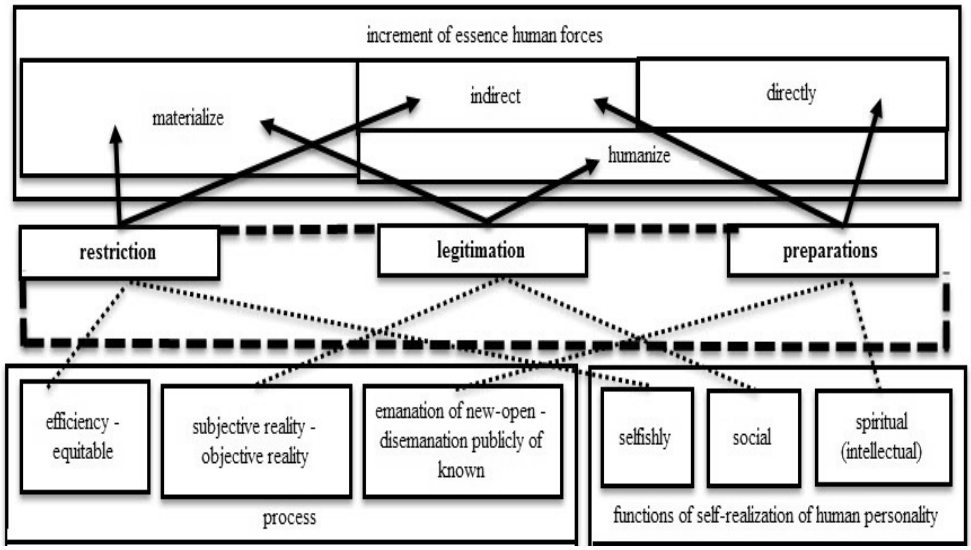
4. Results of the Research

4.1. Mechanism of the governance by transfer of educational technologies

From the author's point of view, the system of governance of the transfer of educational technologies is a set of the main subjects of the transfer of educational technologies and ties between them. It was activated via interaction of subjects of the transfer on the stages of «preparation-legitimation-restriction», which have as general so and distinctive traits (Figure 1). Factors of motives of the interaction of subjects of a transfer of educational technologies on the corresponding stages able to modelling as rational (fully and limitedly), normative (organically rational, opportunism full and hidden) and rationally-normative (alternative, long-term).

Figure 1

The general and distinctive trait of interactions of subjects of a transfer of educational technologies



Source: developed by the author.

The known-model of REMM (resourceful, evaluative, maximising man) (Brunner, 1987) is suitable for governance of factors full- and limitedly-rational interaction of subjects of transfer of educational technologies. In this model of rational external interaction of subjects on the stage of restriction identity with an optimal choice in the sphere of market allocation of the limited resources at the equilibrium situation and actualisation of certain competencies. The initial moment of such choice is forming of a set of possible variants of the interaction of subjects (competence of communication) in whom standard means of achievement of goal was adapted to concrete conditions. From the possible variants of means of achievements of goal (social competences) is selected in what is optimised a utility for the certain subjects of transfer of educational technologies (individual competencies) per by criterion of

maximisation. Thus, the governance of factors of the interaction of subjects of transfer of educational technologies on the stage of restriction at the supporters of rationality is formalised as the function of utility and choice of variants – as the optimising task (author's interpretation):

$$f\ (Pi^{O}, Li^{O}, Ri^{O}) \rightarrow max, \quad (8)$$

where:

Pi – quantity of intellectual product (educational technologies), what is transiting from belonging of seller in the acquisition of legislator on the stage of preparation;

Li – quantity of intellectual product (educational technologies), what is transiting from belonging of legislator in the acquisition of technological brokers on the stage of legitimation;

Ri – quantity of intellectual product (educational technologies), what is transiting from belonging of technological brokers in the acquisition of buyer on the stage of restriction;

o – is the optimal choice at the sphere of allocation by the market of the limited resources at the situation of equilibrium.

The known-model of SRSM (socialised, role-playing, sanctioned man) (Brunner, 1987) can be into the basis of governance by factors of normative and opportunism (organic and rationality) of the interaction of subjects of transfer of educational technologies. According to the model, the organic rationality of external interactions of subjects of transfer of educational technologies on the stage of preparation (prevailing of competence of ability for opening) is coordinating with the norms and standards of society. The interaction of such subjects do not define and solve the task of choice (competence of self-development, creativity), and its criterion is conformity to norms (theoretical knowledge, abilities, skills). Thus, at the governance of factors of the interaction of subjects on the stage of preparation been attempt of replacement of principle of maximisation by its weakened version, that is instead of the best variant are electing the satisfactory or acceptable (author's interpretation):

$$f\ (Pi^{O}, Li^{O}, Ri^{O}) \rightarrow max, \quad (9)$$

$$Pmin < Pi^{O} < Pmax,\ Lmin < Li^{O} < Lmax,\ Rmin < Ri^{O} < Rmax,$$

where:

Pi – quantity of intellectual product (educational technologies), what is transiting from belonging of seller in acquisition of legislator on the stage of preparation;

Li – quantity of intellectual product (educational technologies), what is transiting from belonging of legislator in the acquisition of technological brokers on the stage of legitimation;

Ri – quantity of intellectual product (educational technologies), what is transiting from belonging of technological brokers in the acquisition of buyer on the stage of restriction;

o – is the optimal choice at the sphere of allocation by the market of the limited resources at the situation of equilibrium;

min – minimum and *max* – maximal limitations are on the stages of the interaction of subjects of transfer of educational technologies.

For a governance, the action of the rationally-normative factor of external interactions of subjects of transfer of educational technologies on the stage legitimation is expedient to "approximate" the rationality of their interactions to the certain norms. The corresponding criteria of external interaction of subjects of the transfer of educational technologies as the intellectual product are known, for example, for the stage of preparation as an abridging of time of tuition at invariable its quality or upgrading of the quality of tuition at an invariable of its time. However, adduction of rationality to normative level is a basis of formalisation of priorities of such interaction as a situation, where the subjects increments the materialised and humanised forms of the intellectual product on the stages "preparation-legitimation-restriction". For example, forming the legal, interested in innovations a proprietary of educational technologies (competences are mental, psychomotor, position) and conditions of legalised activity (competences of procedural) in an intellectual sphere. Thus, per the author's vision, is offered to modelling the governance of factors of noted the "approximate" per a unit criterion:

$$(f\ (Pi^{O}, Li^{O}, Ri^{O}) / f\ (Pi^{N}, Li^{N}, Ri^{N})) \dashrightarrow 1, \quad (10)$$

where:

Pi – quantity of intellectual product (educational technologies), what is transiting from belonging of seller in the acquisition of legislator on the stage of preparation;

Li – quantity of intellectual product (educational technologies), what is transiting from belonging of legislator in the acquisition of technological brokers on the stage of legitimation;

Ri – quantity of intellectual product (educational technologies), what is transiting from belonging of technological brokers in the acquisition of buyer on the stage of restriction;

o – is the optimal choice at the sphere of allocation by the market of the limited resources at the situation of equilibrium;

n – normative choice at the sphere of allocation by the market of the limited resources at the situation of equilibrium;

As we see, the aim of adduced of system governance by the transfer of educational technologies is, on the one hand, forming of the powerful potential of innovative educational technologies, and from another – its maximal realisation in the sphere of higher education via by an effective transfer of educational technologies.

The qualitative concretisation of action of factors of motives (Leonidov, 2020) of the interaction of subjects of the transfer of educational technologies is facilitating the development of corresponding indexes, what invocatory to estimate the variants of the interaction of subjects of transfer of educational technologies.

On the stage of preparation, the institutionalisation of the interaction of subjects of the transfer of educational technologies will be initialised by groups, what will realise the special and common interests of appropriation of the intellectual product ("interest groups" (Olson,

1965)). Into the regulating measures of the government, the institutionalisation is prognosticated via inclusion in the analysis of the methodological principles of trust, obligation and sanctions. In such institutionalisation, the shortcomings and advantage of formal and informal character may be represented: a decreasing in trust to measures of government regulation, obligation of their performance, responsibility per consequences of these actions, and also a conscious reproduction of "institutional trap". "Institutional trap" can exemplify of the situation when, the efficiency of legitimate transactions with intellectual ownership is below, then at the non-formalised transactions. Into the non-formalised transactions, the informal relations are transformed to formal, when most of the subjects of the transfer of educational technologies adhere to the informal rules on which are directed the measures of government regulation. From here, the criterion of government regulation of external interaction of subjects of the transfer of educational technologies on the stage of preparation may be a scale of deviation of informal results of intellectual activity of creators from norms (author's vision):

$$f(Pnf) / f(Pf)) \rightarrow 0, \quad (11)$$

where:

Pnf is quantity of transactions with intellectual ownership, what is characterized as informal;

Pf is quantity of transactions with intellectual ownership, what is characterized as formal.

The set of indicators of government regulation of external interactions of subjects of the transfer of educational technologies at the stage of preparation may be hypothetical based on the quantitative estimating of deviations from a certain formal norm in a spectrum: quantity of "abandonments" of legal transactions of intellectual ownership, specific weight of informal norms of appropriation of intellectual product, scales of "secrets of production" and other.

On the stage of legitimation, the institutionalisation of the interaction of subjects of a transfer of educational technologies is realisation with the help of formal norms and the simulated rules. Procedures of patenting, licensing and others like that can exemplify of regulation of institutionalisation of the interaction of subjects of the transfer of educational technologies. Into the regulating measures of the government, the institutionalisation is prognosticated on the basis of consciously or unconsciously fastened norms and rules, which define a form and logical sequence of the interaction of subjects of the transfer of educational technologies. For example, the reproduction of information as a resource in society is legalised within state law. If the legal ability of subjects of transfer of educational technologies has contradiction with government power, then all the processes of their reproduction will be deformed. Shortcomings of government regulation of such institutionalisation are shown in the insolvency of adequately a regulate interaction of subjects of the transfer of educational technologies, disappearance at owners of stimulus to long-term and effective use of intellectual assets, narrowing of prospects of making investment solutions, decrease in capitalisation of economy, rates and volumes of the national income and so forth. From here, the criterion of government regulation of external interaction of subjects of transfer of the educational technologies on the stage of legitimation can be a maximal dynamics (max) of

legalisation of results of intellectual activity (Lia) in the current period (C) of the relatively base period (B) (author's vision):

$$\mathbf{(f (Lia^B) - f (Lia^C)) / f (Lia^B) \text{ –> } max}, \quad (12)$$

The set of such known indicators as dynamics of submission of application for a patent, registration of patents and licenses, specific weight of persons with a scientific degree, etc. may be hypothetical indicators of government regulation of external interactions of subjects of the transfer of educational technologies on the stage of regulation.

On the stage of restriction, the institutionalisation of the interaction of subjects of the transfer of educational technologies has transference of his samples from theoretical models to practice. The variants of the regulating measures of the government are presented by samples from the economic history of own country, or other countries (North, 1991). Into the regulating measures of the government, the institutionalisation is estimated on the basis of the increment of changes in habits, stereotypes, traditions of external interactions of subjects of the transfer of educational technologies which were more effective in comparison with alternative. The rating of its estimates depends on understanding by subjects of the transfer of educational technologies of samples in part of contents of rules and norms (mainly, formal) of regulating measures of the government. These measures are realised via the officially regulated norms in which the shortcomings of changeability and contradiction is expedient prevented through the decrease in costs of rapid distribution of effective samples in external interaction of subjects of the transfer of educational technologies on the stage of restriction. As a criterion of government regulation of interaction of subjects of the transfer of educational technologies at the stage of regulation may be argued the part of the most-rating educational technologies in their total quantity, which are used in educational practice (author's vision):

$$\mathbf{f (Qr) / f (Q) \text{ –> } max}, \quad (13)$$

where:

Qr – quantity of cases of use of rating technologies;

Q – total quantity of all technologies which are used in educational practice.

The following hypothetical situation can be an example of the use of criterion (13). Computer technologies are the most rated among other educational technologies, but are applied in 5% of educational programs in educational establishments. From here, the estimate of government regulation of interaction of subjects of the transfer of educational technologies at the stage of regulation is unsatisfactory.

The developed criteria of governance of a transfer of educational technologies provide a possibility of updating an educational network via by use of the open platform of ICT and the cloudy servers.

4.2. Place of ICT into the transfer of educational technologies

As a generally known, countries-members of the European Union (EU) are the participants of Agreement about a trade aspect of rights of intellectual property (TRIPS), what being the confessedly international standard (Otten, 1998) of appropriation of results of intellectual activity. Besides it, in the EU, the systems of protection of trademarks, industrial prototypes, plants variety are successfully functioning. For example, per trademarks and industrial prototypes is responsible Department of harmonisation in the domestic market (Office of Harmonization in the Internal Market, http://www.oami.eu.int), per patents on plant variety – Department on plant varieties of Community (Community Plant Variety Office, http://www.cpvo.europa.eu). On the one hand, competition between the universally recognised European standard of appropriation of results of intellectual activity and its autonomous (national) phenomenon is possible, and on the other hand, the only-similarity in the period of their legitimacy is functioning. It is an empirical moment of the economic concept of "information society" with its problem of interrelation of constructivism and scientific rationality in the context of informatisation, computerisation and development of network technologies.

Distribution into the EU of new forms of intellectual activity has created a need for innovative educational technologies which have to promote the efficiency of tuition during all life. The important factor of competitive activity in the world market are modern educational technologies. The new conception of education in "society of knowledge" stimulates a forming in the educational process of competencies, what is necessary for the creation of educational technologies and their association with an educational network. For it of aim is prudent activating in the infrastructure of transfer of educational technologies all aggregate of types of providing (technical, programmatic, informative, methodical, organisational) of the informative, modern environment of establishments of higher education with the aim of organic combination in the educational process of educational, scientific, and innovative activity.

In the infrastructure of transfer of educational technologies, the external interaction of their subjects on the stage of preparation and actualisation via control per the observance of academic respectability and his realisation on the basis of online-services of network the Internet. So, the competencies of subjects of transfer of educational technologies on the stage of preparation able to develop with the use on-line of services of checking for plagiarism: StrikePlagiarism (http://Plagiat.pl/), Advego Plagiatus (https://advego.com/plagiatus/), Copyscape (https://www.copyscape.com/), Contentyoda (http://contentyoda.com/), Viper (http://www.scanmyessay.com) and other.

The competences of subjects of transfer of educational technologies on the stage of legitimation able to expansion via the skills of searching operations in on-line services of patent search (Patent Lens, WikiPatents, Free Patents Online, PRIORSMART та ін.) or in the open database of objects of intellectual ownership, such, as: USPTO (http://www.uspto.gov/patents/process/search/index.jsp – database of patent department of the USA with few million patents per period from 1976), Canadian Patents Database (http://patents.ic.gc.ca/opic-cipo/cpd/eng/search/advanced.html – database of patent service of Canada with more than 1.9 million patents for period from 1869), Esp@cenet (http://ep.espacenet.com/ – the

database of the European patent department of «European Patent Office» has more 60 million patent requests and patents), UKRPATENT (http://base.ukrpatent.org/searchINV/ – the database of patents on inventions and useful models of Ukraine), UAPD (http://www.eapatis.com/ – Eurasian patent department, what has over 30 local patent databases) and others.

On the stage of restriction, the competence of subjects of transfer of educational technologies are fixed per to such means of ICT: web-technologist (professional networks, forums), server programmatic-imitation complexes, telecommunications (videos-conferences). The elements of the infrastructure of transfer of educational technologies will contribute to the improvement of skills of searching-analytical activity, processing of information, inclusive development of the creative potential of subjects.

The transfer of educational technologies has nexus not only with the distribution of results of research and developments in the sphere of education and their further use in the national economy, but also attracting of employers to the educational process (informing about production base of subjects of economics, the existing production problems, prospects of further employment, etc.), forming at subjects of adaptive competence. The activation of participation of establishments of education in a transfer of educational technologies opens a way for the attraction of additional financing for the creation of necessary material and technical resources, modern means of informatively-computer technologies and so forth.

5. Conclusions and Prospects of Further Researches

Per by results of the development of the mechanism of governance of the transfer of educational technologies and detection of specifics of economic interests, motives and actions of it of subjects has a possibility to draw such conclusions:

- process of interaction of subjects of the transfer of educational technologies is divided into three main stages: preparation (developer or seller is forming a presentation about the educational technology as about the innovative intellectual product); legitimation (educational technology as at the innovative intellectual product has juridical recognition as at object of the ownership right); restriction (the transaction of rights of property or use of the educational technologies aimed to the buyer);
- on the stage of preparation, the main criterion of innovation of educational technology is an abridging of time of tuition at invariable its quality or upgrading of the quality of tuition at an invariable of its time;
- on the stage of legitimation, the main criterion for an estimate of the interaction of subjects of the transfer of educational technologies is the acceleration of legitimation with an adequate abridging of time of consideration of the submitted applications;
- on the stage of restriction, the main criterion of estimation of the interaction of subjects of the transfer of educational technologies is the speed of distribution of the innovative educational technologies in educational practice;

- discovered at the stages of "preparation – legitimation – restriction" general traits (aiming at an increment by subjects the materialised and humanised forms of intellectual product) and distinctive traits (processing of interaction, functions of self-realisation of human personality);
- the developed criteria of governance of the transfer of educational technologies can be a basis for making decisions in the sphere of an educational network, including, by way of the use of open platforms of information and communication technologies and cloudy servers;
- further researches must be aimed at an exactitude of methodologies of the definition of market prices of the educational technologies (as commodity form of the intellectual product) with use of modern ICT and development of special economic-mathematical models of such estimation.

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