

## Teacher's Labour as a Tool of Forming Human Capital of Higher School Graduates

Evgenij M. Dorozhkin<sup>a</sup>, Tatyana V. Leontyeva<sup>a</sup>,  
Yelena Yu. Scherbina<sup>a</sup>, Anna V. Shchetynina<sup>a</sup> and Evelina P. Pecherskaya<sup>b</sup>

<sup>a</sup>Russian State Vocational Pedagogical University, RUSSIA; <sup>b</sup>Samara State University of Economics, RUSSIA

### ABSTRACT

The relevance of the research problem is determined by the intensity of modernization of Russian education, which includes the integration of Western technologies, traditions of the Soviet education and modern requirements to higher education in Russia. The aim of the article lies in justification of one of the most important for Russian education problem of the links between the teacher's labour and quality of education of higher school graduate. A leading approach to the study of this problem is practice-oriented approach to the training of highly qualified specialists. The following results of the study were obtained: the situation in modern Russian education over the past decade was described, taking into account the change of educational paradigm; the idea that the accumulation of human capital by worker of higher school results in achieving the best results in the formation of students' competences is justified; the methodology of control the level of formation of competences of university students as a result of the teacher's labour is presented; the system of evaluating the level of formation of competences of students and graduates of the university is developed, indicators of which, obtained in its implementation in practice, can find application in the evaluation of the results of work of the teaching staff of the University. The article can be useful for researches in the field of education, teachers, postgraduates, undergraduates and students of pedagogical education.

### KEYWORDS

Competences; human capital; teacher's labour;  
university graduate

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### Introduction

Renewal of Russian education in XXI-st century occurs with due regard to the positive tendencies of its development in the world: the proposed accent transfer from surviving mode to development mode. Educational system faces a global problem: to prepare graduates to new conditions of life and professional

**CORRESPONDENCE** Anna V. Shchetynina ✉ [anna-73-schetinina@yandex.ru](mailto:anna-73-schetinina@yandex.ru)

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activity in information environment of the society in proper time. Large scale of this task explains the necessity of changing educational paradigm.

Integration of western techniques into Soviet-Russian educational model with preservation of its positive experience is an optimum alternative. Solution of contradiction between traditions and innovations should result not in the destruction of home educational model, but in its enrichment so that a solid theoretical training of graduates would combine with practical skills.

Development of competence approach is one of the attempts to bring education into concordance with demands of the market. Scholars define it as a practice-oriented approach which presupposes mastering with a norm of activity, experience or achieved result that would make it possible to judge about the level of competence of a specialist. In contrast to the term qualification which is rather neutral in morally-ethical respect when ability of paid employee to make responsible decisions and act in accordance with requirements of official and public duty is kept in mind, competence is understood as a merit of a personality of specialized activity in the sphere of social and technological division of labour (Traynev, Mkrtchyan & Savelyev, 2008).

Today modernization of Russian higher education touch its structure itself. Until recently mono-training was traditionally practiced in Russia: after five years of full time training a graduate received a diploma of specialist possessing fundamental knowledge base. Since 2007 a law of a two-level system of higher education is in force; according to that Bachelor's degree corresponds to the first level of higher education, and Master's degree corresponds to the second level. To successfully execute professional activity, Bachelor should be prepared to solve a whole complex of professional tasks. The magistrates and post-graduate course are considered as institutions for reproduction of personnel of highest qualification on the base of integrated space of education and scientific research, and is included into a multi-level structure of educational programs, which corresponds to the requirements of Bologna process. This will allow to provide Russian diplomas with "convertibility", but it will take time to achieve complete compatibility of Russian and European diplomas, if any.

Teaching process in Soviet Union and Russia is traditionally based on a so-called "linear" system, students studying subjects of educational program in definite order. Implementation of a system of test points, possibility to build own path of education, mobility make an incomplete list of problem areas of new approach. At present curriculae include huge amount of unassisted work and reduce number of lectures in favour of practical work. Accumulation, analysis and comprehension of big volume of information is to be done by a student independently. Such work forms a whole line of generally cultural and professional competences, and improves quality of both education of a person and human capital in general.

### Literature Review

Change of educational paradigm requires primarily diversification of educational programs, reinforcement of inter-disciplinary integration and increase of a higher school teacher's activity. Potential of educational system in increasing human capital of students is implemented by teacher's labour. Sufficient attention was paid to the description of the specific of teacher's labour in both domestic and foreign literature (Abakumova, 2011; Bess, Anderson &

Murray, 1972; Bianchetti, 2010; Charters, 1942; Bagirova & Scherbina, 2014; Bogomolova & Kuleshova, 2012; Harlow, 2003; Korneeva, 2007; Manokhina, 2013; Maues, 2010; Norkin, 2012; Ovchinnikov & Tsiring, 2013; Solomon, 2013; Tkachenko, 2010; Kalimullin, Vlasova & Sakhieva, 2016). It is accepted: [...] profession of a teacher of higher school has own features: high degree of autonomy of profession, that requires intensive mental work; higher degree of professional responsibility; combination of functions of teacher, research worker and manager; deliberate need for continuous self-development, based on pedagogical activity and research; dependence of the effectiveness of educational activity from the side of both student and teacher (Tkachenko, 2010).

Thus, the task of modern education becomes orientation on not only comprehension of certain amount of fundamental knowledge, but also development of human capital, obtaining experience of independent activity and personal responsibility, forming up-to-date key competences by different spheres of vital activity. During the years of implementation of such approach, the idea of direct correlation of human capital of teaching staff of the University and human capital that is formed during the process of training graduates was worked out.

## **Materials and Methods**

### ***Research methods***

The following methods were used during the research: theoretical (analysis of pedagogical ideas; analysis of basic concepts of the research; forecasting); empirical (the study and analysis of state standards and internal documents of the universities; method of modelling); methods of mathematical statistics and graphical representation of results.

### ***Experimental base of the research***

The experimental base of the research was the Russian State Vocational Pedagogical University.

### ***Stages of the research***

The study of the problem was carried out in 2 stages: at the first stage the analysis of pedagogical conceptions of evaluation of a teacher and his influence on formation of students' competences was made, key concepts of the research were identified, the documentation was analysed; at the second stage the method of monitoring the level of formation of competences of university students as a result of teachers' work was developed.

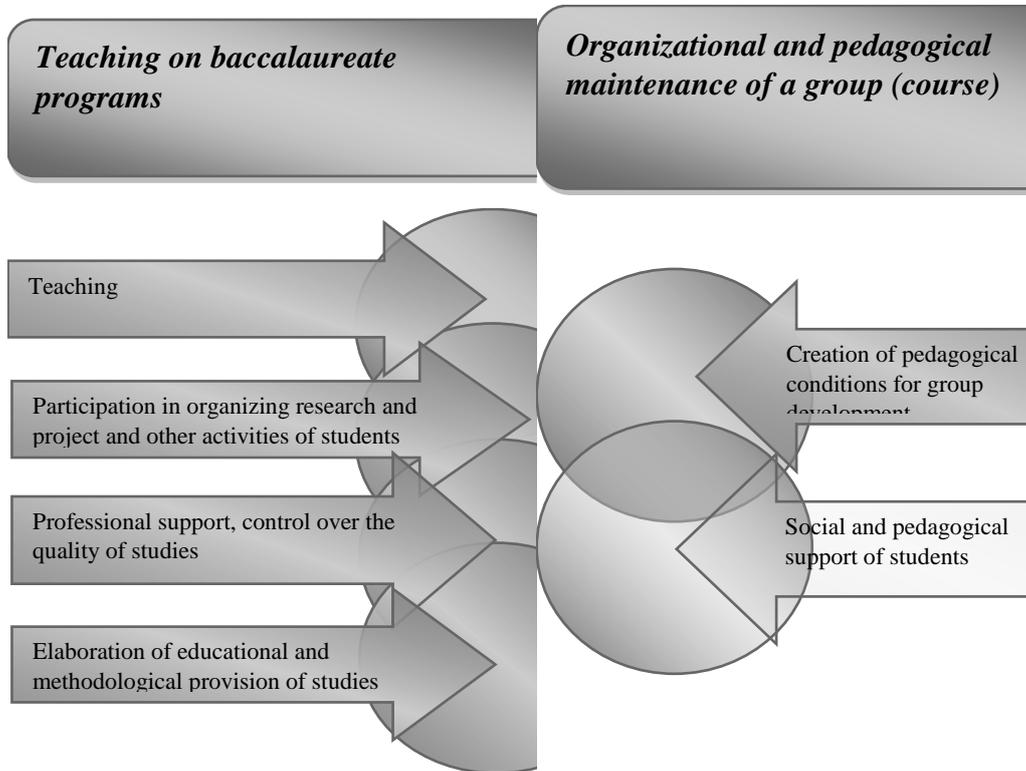
## **Results**

### ***Dynamics of content and parameters of teachers' labour during the process of transfer to information- oriented society***

Development of professional standard of a higher school teacher is an actual task of modern Russian education. National Council on Professional Qualifications is given task to develop and approve by 2015 a set of new professional standards that would become a base for reconfiguration of the whole system of professional education. The project of professional standard includes elaboration of the so – called “Functions Chart”, regulating job

functions of higher school teachers. These functions are structured in accordance with levels of qualification.

Let us introduce a scheme of job functions that should be systematically fulfilled by a higher school teacher of Baccalaureate educational programs, as developed by authors' body (figure 1).



**Figure 1.** Job functions of Associate professor, Chief teacher (tutor), teacher, assistant lecturer during implementation of baccalaureate educational programs

Each job function prescribes job activities, skills and knowledge that are required and aimed on forming student's competence. According to the project of professional standard and established world experience, a teacher should be not only a highly skilled expert in a definite area of professional knowledge, but also an innovator in teaching methods and aids, a leader in research activities, able to use techniques of educational process. Such multi-aspect character is appropriate to few professions only.

Subject oriented informational activity of a teacher is closely connected with his research work. Renewal of subject knowledge is executed not only by revision of newest information, but also by conducting independent research in definite science. At present research activity is considered as not only a tool of teachers' professional development and a part of duties of teachers' staff, but also as indicator of University's effectiveness in general.

Training a specialist with high-quality and high-mobility, creativity, adaptability and informational literacy is impossible without a teacher of new type, who should possess the merits, which he should transfer to a student. Quality of students' education depends on successful activity of employees of

higher education facilities, directly involved in teaching process. For this study we find very important a thesis that ***accumulation of human capital by a higher school employee results in achieving optimal results in forming competence of students.***

Let us represent the model of **key competences of modern teacher of higher education facility, ensuring effectiveness of his professional activity.** Key competences were picked out in accordance with the subject of activity of a teacher and, accordingly, direction of his efforts.

***1. In the sphere of the improvement of special knowledge on subjects he is a teaching, a teacher should be able to demonstrate:***

– readiness to continuous improvement of subject knowledge, which are enriched and specified rapidly at present;

– readiness to acquire knowledge in the sphere of new technologies;

– readiness to process big volumes of information: teacher should be able to accomplish its selection and analysis, and coordinate all new with the existing knowledge.

***2. In the sphere of organizing and control over studying activities of students, the teacher should manifest:***

– readiness to study, understand and properly use federal state educational standards;

– readiness to methodic and didactic support of the process of forming key competences of a graduate in accordance with his chief special subject;

– readiness to the elaboration of systems of monitoring and evaluation of the development of students' competences and to forming correct methods and aids of evaluating graduate's competency.

***3. In the sphere of bringing together pedagogical theory and practice a teacher should be ready to:***

– efficient reaction on changing demands of the society, that is to the elaboration of teaching techniques and search of learners' guides and didactical materials, suitable for training a graduate, needed in modern historical and cultural situation;

– cooperation in teachers' group that should be geared up for providing with integrative teaching, because modern education should be focused on a "universal" specialist, that is a person, not limited to the narrow frames of his chief special subject;

– participation in the activity of practical training department of the University;

– search and involvement of potential employers into teaching process.

***4. In the sphere of upbringing a teacher should:***

– participate in conducting social and pedagogical support of students;

– give special consideration to issues of forming value guidelines of students.

***5. In the sphere of scientific and methodological work a teacher should:***

- participate in life of scientific community in order to timely get acquainted with latest achievements of science;
- be involved into research work to improve his scientific qualification;
- represent results of own research work in publications, included in scientometric databases, and also on conferences and other scientific events;
- strive for leading positions in research activities.

The introduced model of key competences of a modern teacher of higher school may be used for designing and planning competences of higher school graduate. It should be taken into account while evaluating effectiveness of teacher's labour. This system may be taken as a base while planning work programs, curriculae, that are made on the basis of a competence approach to planning results of studies. Specification of content of competences, that are necessary to a future teacher of vocational and pedagogical university as actualized within federal state standards should be conducted on the base of analysis of the list of competences, included into these standards.

For comparison, let us adduce viewpoint by L. F. Krasinskaya (2006), who singles out the following kinds of activity:

- pedagogical proper (direct communication with students);
- subject – informative (replenishing special knowledge about the subject);
- research;
- technological and engineering;
- activity on professional and personal self-development.

A significant coincidence with group of teacher's competences by kinds of activities, performed by him, proposed by us says, that kinds of higher school teacher's activities proper remain the same, as they were before, but their competence components as we may suggest do not differ significantly (L. F. Krasinskaya (2006) does not dwell on teacher's competences).

Teacher's competences proper are one of the factors of successful forming human capital of students of higher school.

Implementation of quality and result model in education is based on renewed content of a *model of a graduate*. If before a static set of professional knowledge, skills and habits of a graduate made an expected result of education, then at present the result should be made by a set of competences, to a considerable degree including dynamical components:

- readiness to reorganization, adoption of alien and transformation of own culture (including professional one) for creating common field of cooperation in the conditions of large scale globalization of cultures, consolidation and widening of contacts' network;
- readiness to renewing and replenishing knowledge;
- ability to timely adopt own skills to new conditions;
- creativity as readiness to design and produce a new economically needed product.

Dynamical components stand side by side with professional knowledge, skills and possessions, ensuring their transformation if necessary. Such a graduate is free from temporal and local cultural restrictions as much as

possible and at the same time is quite flexible and mobile for better use of his possibilities, obtained during studies, in any unfamiliar conditions.

We may definitely state that accumulation of human capital by an employee of higher school will result in:

- improvement of higher school teacher's positions on labour market;
- ensuring of compatibility of a higher school graduate due to higher quality of education;
- increase of a higher school's compatibility.

A survey of teachers' labour reveals a contradiction between the necessity to structure this process in order to make it manageable from one hand, and absence of methods of managing teachers' labour from the other hand. As teacher's labour organization we understand the system of control action on various aspects of such labour: "labour conditions, encouragement, teaching process, working schedule, possibility of job mix, development and implementation of of new teaching techniques" (Manokhina, 2013). In a present day Russian educational system there is a lack tools for organizing teacher's labour, that would provide with strategically based integration of its aspects in order to systematically form human capital of a graduate. Solving problems of organizing teachers' labour would favour the visualization of interrelation between teacher's achievements and students' results.

### ***Methodology of checking out the level of formed competences of university students as a result of teacher's labour***

Evaluation of student's and, later, graduate's competences developed is one of the attributes of the result of teacher's labour. This thesis, evident for modern paradigm of education according to which a competence approach towards organization of the process and evaluation of quality of training of specialists should be taken as a base during elaboration of methodology for the control of results of teacher's labour. Such methodology that would allow to establish real relationship between results of teacher's labour and the level of competences of university students' and graduates' competences developed, does not exist in Russian educational system today.

This study solves the problem of developing such system for evaluating the level of higher school students' and graduates' competences developed, so that indices, received during its implementation in practice could be used during evaluation of labour of teaching staff of the University.

Competences as a subject of pedagogical measurements become a topic of wider scientific discussion in Russia. Perhaps, there is no other educational phenomenon that would be discussed so widely, actively and at the same time fruitlessly in the sense of developing a universal system of evaluating competences of a graduate or a student, completing a school year. To our opinion, this may be explained by two main reasons.

The first one is in the absence of uniformity in marking out competences. State educational standards of different directions of training that exist today include separate lists of competences, here defined as GC (generally cultural) and PC (professional competence) and are formulated in the form of descriptors with key words like *able to*, *ready to*, *participates*, etc. Let us notice, that research works in competences' approach in education usually do not appeal to

those descriptors, but to concepts of “communicative competence”, “inter-cultural competence”, “foreign language competence”, “socio-cultural competence”, “managerial competence”, etc. These are proved, introduced and developed by scholars independently and frequently without correlation to educational standards. At the same time, any competence named this way is as a rule considered as (1) having integrated or complex character, as it is given in details through the aggregate of GC and PC, established by educational standard; and (2) is intended for forming within different disciplines as competences are interdisciplinary by their nature.

It is symptomatic, that works in hand establish the list of such “integratory” competences in a quite different and arbitrary way. At the same time, it was repeatedly mentioned in scientific literature, that heterogeneity of research workers’ approaches towards separation of graduates’ competences handicaps their diagnostics.

Solution of the task of monitoring of forming the competences and measuring the level of their being formed on the final stage of education is substantially complicated by: absence of definite names of competences like those, developed in scientific theory, in Federal State Educational Standards (hereinafter FSES); unconformity of various scientific concepts; high degree of separation of descriptive formulas, used in FSES texts; and also the task of complex parallel forming of one competence within different disciplines and the lack of mechanism of coordinating activities of teachers of those.

Second reason of failure of attempts to develop a control mechanism within the discussed approach is partly derivative from the first. It consists in sparsity of studies that would have a goal to systematically approach to measuring competences. Development of a system of evaluating the level of completely formed competences is handicapped by separation of competences’ descriptors in force in FSES, and also by difference of standards.

A big amount of competences, separated by various grounds, was already given an assessment in scientific literature, for example: All general reasoning on the subject as how one should evaluate competences, as well as endless listing of their types and kinds that is so popular in published works do not help, but only tangle practical workers and managers of education (Chelyshkova, 2012).

In the context of development of a system of evaluation of teacher’s labour by results of checking up the level of competences developed in university students it makes sense to keep in mind the following:

it is necessary to enlarge showings up to total scores for a definite reporting period, say, for a school year, which does not cancel current control over forming of competences within every teaching discipline;

it is necessary to enlarge showings of the degree of being formed of every competence, determined by the standard, up to average **complex showings** by topical aggregations of kinds of competences, total amount of descriptors of which within one educational program to reach up to 50 wordings (primarily subdivision to generally cultural and professional is actual; then come research, managerial, professional and functional competences, etc. );

it is necessary to re-orientate from reporting on the results of teaching every student to **reporting on showings of the degree of competences’ developed**

*in among all students' body* of academic group, stream, faculty and then University.

We propose to evaluate the degree of competences' forming of a university student at the end of each academic year with the use of evaluation means already existing and those to be developed further on by a **system of enlarged showings**. We find it possible to reorganize lists of competences of a university graduate, presented in FSES papers, into a system, consisting of two blocks (according to the given division into generally cultural and professional competences), each including several types of competences.

Analysis of **generally cultural competences**, made by various FSES, shows that they may be subdivided into five kinds:

- informational (Inf);
- communicative (Com);
- socio-cultural (Soc);
- psychological and valeological (PsV);
- methodological (Meth).

Analysis of approved federal educational standards in force, in their part which formulates **professional competences**, allows to conclude that it is possible to preserve division of types of competences onto kinds in accordance with kinds of professional activities, that may vary from one FSES to another, including, for instance, the following kinds of competences:

- research (Res);
- designing (Des);
- managerial (Man);
- production applied (or technological) (PA);
- generally professional (GP);
- pedagogical (Ped) and others.

Teachers are afforded an opportunity to implement creative approach to the development of components of competences on the assumption of the following evaluation of successfulness of their forming and control with bringing results to an average showing by all components of the competence.

Level of the development in a student each competence out of ten or nine (five generally cultural and five or four professional ones) may be evaluated by a 100 points' grade with the help of criterial aid, presented in form of a binary (a competence developed – not developed) or a multi-level scale, say, a four-level (25 points on each level):

- competence is not formed to the level of FSES requirements;
- competence is partially formed, but further work to compete its forming is required;
- competence is formed on the level of FSES requirements;
- competence is formed on the level, exceeding FSES requirements.

We may propose an alternative of measuring the level of a competence of each kind developed, when a stock of measurement instrumentation is worked out by each teacher (elaboration of such stock is an obligatory element of teacher's labour) for his subject and in accordance with competences, declared in

the schedule; it is used in educating process within the period of teaching during conducting current, intermediate and final control on the subject. In so doing he fills in a blank form (a table), developed on the base of FSES of this course of training, with the list of students and indication of types and kinds of competences. Blank forms of this kind, common for the University, will be an obligatory managerial and methodological provision of teacher's labour.

Then, calculation of the level of student's qualification (*StudQual*), which is placed in direct dependence on development of competences in the aggregate is made by the formula:

$$StudQual = \frac{\text{Amount of the values on development of competences of student}}{\text{number of competences}} \quad (1)$$

In this case:

$$StudQual = \frac{Inf+Com+Soc+PsV+Met+Res+Pa+Man+Des}{9}, \quad (2)$$

where *Inf*, *Com*, *Soc*, *PsV*, *Met*, *Res*, *PA*, *Man*, *Des* are the levels of development of student's competences, marked in a register by a teacher (Tab. 1.4.)

If kinds of competences have different value, they are given weighted coefficients:

$$Qual = B_1Inf + B_2Com + B_3Soc + B_4PsV + B_5Met + B_6Res + B_7PA + B_8Man + B_9Des, \quad (3)$$

where *Inf*, *Com*, *Soc*, *PsV*, *Met*, *Res*, *PA*, *Man*, *Des* are the levels of development of according competences;

$B_1 - B_9$  – are weighted coefficients, established by a designer of the formula with consideration of complexity, conditions of forming the competence and its value, in this connection

$$B_1 + B_2 + B_3 + B_4 + B_5 + B_6 + B_7 + B_8 + B_9 = 1. \quad (4)$$

Calculation of aggregates of the level of development of one competence in students' educational group (*Kgr*) is made by the formula:

$$Kgr, \quad (5)$$

where *S* – number of students in a group;

*i* – number of a student in the group;

*Qual* – qualification of one student.

In this case, it is possible to make a calculation of a complex average index of the level of developed of all scaled competence in students' group in whole and put it into single figure. Calculations of such kind sophisticate teacher's labour in the sense that its result receives a definite digital expression and may be evaluated easily, and this imposes bigger responsibility on teachers' body in general.

Transfer to a competence approach in education should be conducted in the conditions of harmonization of old and new in methods of teaching and control of the results in order to avoid incorrect organization of teaching process. Demand to control development of scaled competences (according to the requirements of a standard towards readiness of a student to perform one or another activity) from one hand, and verified experience of controlling student's progress (*P*), which

also may be calculated on the base of numerical score and rating system from the other hand should be kept in mind. One should not exclude from calculation an indicator of the development of competences and indicator of advancement, which in general reflect the result of teaching. This may be expressed by a formula:

$$VI_{gr} = C_{gr} + P_{gr}, \quad (6)$$

where  $VI_{gr}$  – a versatility indicator of the development of competences of students in teaching group for reporting period;

$C_{gr}$  – level of the development of scaled competences in the group;

$P_{gr}$  – averaged index of student's progress.

An expert team of the University may define weighted coefficients ( $B_1$  и  $B_2$ ) for each of these two indicators. It is reasonable to assign bigger coefficient to the indicator, reflecting specific of competence approach to education. Then a versatility indicator (VI) of the level of development of student's competences will be calculated by a formula:

$$VI_{gr} = B_1 C_{gr} + B_2 P_{gr}, \quad (7)$$

where  $VI_{gr}$  – a versatility indicator of the development of competences of students in teaching group for reporting period;

$C_{gr}$  – level of the development of scaled competences in the group;

$P_{gr}$  – averaged index of student's progress;

$B_1$  и  $B_2$  – weighted coefficients established by a designer of the formula with consideration of value of indicators, established by University, in this connection

$$B_1 + B_2 = 1. \quad (8)$$

Calculation of indices for graduates (bachelor students) may be conducted with consideration of results of final state examinations or defense of graduation project.

A versatility indicator of results of teaching of students' body of a group should correlate with general indicator of teachers' staff, working in the said group in the course of year.

In this connection default or negative correlation may be grounding for:

- reconsidering work programs of subjects;
- elaborating correcting measures for elimination of unsatisfactory results of learning of students of the group;
- introducing of coefficients of correction to bonuses;
- revealing competences, shown to be of insufficient results by students, that mostly affected complex index of level of competences' development in students' group, followed by defining competences of a teacher, absence or low level of which could cause such result;
- taking measures for advanced training of teachers;
- for reorganizing in prospective – say, to the beginning of new school year – teachers' staff, training students (of the forthcoming stream) for the same course of studies.

## Discussions

The solution of the problem of the formation of University graduate as specialist possessing the necessary competences meets the requirements of modern Russian economy. In turn, the processes of human capital development in students occur due to teachers' work. Despite the diversity of sources of theoretical and practical developments in the field of formation of students competences (Krasinskaya, 2006; Chelyshkova, 2012), still, there are no effective proven methods of management of teaching labour to achieve a high quality of education at the University. On the other hand, there is an educational conception, which underlays, for example, the LOTA project of the Open University of the UK, according to which the university education may not come down to getting achieved or not achieved results as a set of behavioral reactions, because the result of training is always more complicated. The basis for determining the expected learning outcomes in the framework of the mentioned project is "willingness to learn", which implies a greater independence of the student when learning (Elkina, 2015). R. Garner (1987) states that students' self-selection of principles of teaching allows to develop responsibility for their own education, as evidenced by the Belgian scientists K. Struyven, F. Dochy & S. Janssens (2005), and also Russian studies by N. I. Nelyubin (2014). It is emphasized that the educational environment should be as diverse as possible and promote creative activities of students, so the role of the teacher in creating an educational environment and having direct or indirect impact on students cannot be underestimated.

The analysis of foreign experience has shown that in most foreign universities special attention is given to qualitative criteria (evaluation by independent experts) of individual teaching (Baidenko, 2011). In many countries one of the forms of educational quality control is stringent procedure for appointment of teachers and especially candidates applying for the posts of associate professors or professors. Besides, in foreign approaches to estimation of quality of teacher's activity the participation in research work and teaching effectiveness are considered as systemically important, although not the only components.

While in the Russian practice, to date, the relevance and need for assessing teaching as part of the quality management system is still proved by researchers (Bedrachuk, 2009; Kurgansky, 2006; Norkin, 2012), Western colleagues in education and evaluation of teaching personnel even in the early 90-ies have identified three functions of systems of assessment of teachers: informational, motivational and stimulating. It was proved empirically that the most important condition of improving educational process is the increase of teacher's pedagogical skills, which were and remain the core element of any educational system. Thus, for example, "the quality of scientific management today is given so much attention that it is possible to speak about formation of the European culture of scientific management" (Baidenko, 2011).

## Conclusion

Value of the proposed model of analysis of evaluation of students' competences lies in its consideration of order on systematic forming of

competences by teachers' staff, encouraging teachers to organize coordination and integration of their activities and efforts.

To our opinion, a change-over to the technology of collective planning of the process of forming teachers' competences is necessary. This becomes important as it allows to achieve responsible attitude of teachers towards forming competences within their subjects (disciplines), because on the stage of sizing up it will be important for the staff to define the contribution of each teacher to the cause and reveal the subject (discipline) that caused depreciation of overall index. A question about complexity of interpretation of evaluation results comes up: what subject (discipline) is in charge of poor results, shown by students.

One should not underestimate the potential of this method in relation to evaluation of level of development of separate competences in students on the scale of not only academic group, but also a branch (faculty, institute) and the University in general. At the same time, the most important kinds of competences, having influence on reporting figures and well-being of a graduate during adaptation period, connected with the beginning of professional activity, may be selected for control. Propriety of such evaluation of level of one of competences (research, for instance) developed will strongly depend on measurement instruments chosen and uniformity of approaches towards evaluation, which again approves the necessity of collective labour of teachers.

The procedure of receipt of data to evaluate should be transparent and accessible, too. For example, measuring of research competence of a student should be based not only on tests' results and opinion of a teacher, but also on reliable (based on documentation) data about personal student's achievements – participation in scientific activities, research work, awards.

### Recommendations

Index, corresponding to the definite type of competence as determined on the scale of branch of University would allow to define rating of the branch as per level of readiness of students to the fulfillment of corresponding kind of activity, and perform planning of activity of this branch for the next period correctly.

If we analyze an index, corresponding to a definite type of competence, on the scale of educational facility, results of the analysis may become a grounding for reconsideration of existing regulations on teacher's labour payment, change of priorities in score and rating system, according to which bonuses are charged, and also to planning personnel policy of the University and close goal setting; achievement of those, in its turn, is necessary to raise rating of a Russian university. Selection of principles of organizing University teachers' activity in future depends on evaluation of the results of students' studies.

### Disclosure statement

No potential conflict of interest was reported by the authors.

### Notes on contributors

**Evgenij M. Dorozhkin** is PhD, Professor, Rector of Russian State Vocational Pedagogical University, Ekaterinburg, Russia.

**Tatyana V. Leontyeva** is Doctor, associate Professor of Russian State Vocational Pedagogical University, Ekaterinburg, Russia.

**Yelena Yu. Scherbina** is PhD, head of the Dept for the Development and Fulfillment of Educational Programs of Russian State Vocational and Pedagogical University, Ekaterinburg, Russia.

**Anna V. Shchetynina** is PhD, associate Professor of Russian State Vocational Pedagogical University, Ekaterinburg, Russia.

**Evelina P. Pecherskaya** is Professor of Samara State University of Economics, Samara, Russia.

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