Pedagogical University-Supervised Chair in Schools as a Means for Educational Transfer

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The article argues that a university-supervised chair at school is a new format of partnership between school and pedagogical university. The authors analyze socio-cultural background of the origin of university-supervised chairs and the possibilities for a qualitatively different research and methodology work of school teachers. The authors reveal specific features of the interaction of university faculty members and school teachers in their joint projects through the concept "transfer". Characteristics of such partnership are described (knowledge-based practice, mutually beneficial activities, practical orientation, efficiency) in the article. The article identifies and describes transfer zones, participants and forms of cooperation using theoretical analysis and focus group studies of cooperation between Omsk State Pedagogical University’s departments and regional schools by a means of university-supervised chair. It is underlined that this cooperation should be undertaken by interdisciplinary teams.

Keywords: knowledge transfer, university-supervised chair, pedagogical university, research and methodology work, university-school partnerships, focus group.

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Introduction

Growing importance of continuing professional development of teachers who are able to respond adequately to the demands of a new era is seen today and it is characterized as a complex, unstable, largely contradictory phenomenon. The transition from an industrial economy to an information-based, global economy burdened with environmental issues has become obvious these days. The priority is given to information technologies, the development of a multinational system of values, the expansion of information channels and growing importance of cross-cultural communication, which leads to the formation of a new cultural and work reality.

Professional activities of a modern teacher acquire such features as nonlinearity, variability, contextual conditioning, mosaic and uniqueness. In conditions of modernization of education, the teacher works in a fundamentally new environment, which is characterized by new trends.

The current socio-cultural situation requires teachers to design their own professional development program and continuously refill their “competence package” [25]. The interaction of pedagogical university faculty members and school teachers in their joint projects within the framework of university-supervised chair at school is a good way to develop teachers’ research and methodology competence.

Theory analysis

Teachers’ continuous professional development

The continuity of teacher education today is seen as a fundamental principle of education which involves an inclusive, forward-looking, individualized (in terms of time, pace and focus) professional development of the teacher. The main condition for traditionally understood education — ready-made, systematized knowledge that should be learned by heart — is becoming outdated. Continuous pedagogical education values the role of informal, casual or spontaneous training, the content of which is determined by different factors: changes in the professional activity, requirements of employers, a particular place of work, and the contexts that determine the need for further training and development [2]. This new view at educational process suggests its integrity and integration, which includes “formal” and “informal” aspects. Continuing teacher education is a new way to carry out professional work of the teacher in the XXI century, which allows the teacher to be mobile and to conform to modern social and cultural space. There are three vectors of professional development of the teacher in the process of continuing education:

— “Vector of progress” implies that the teacher improves professional qualifications, remaining at the same level of formal education;
— “Vector of movement upwards” corresponds to the level of professional education system (primary, secondary, tertiary);
— “Horizontal motion vector, moving aside” means the teacher’s ability to change her specialty [20].

Professional development is not similar to career growth and success in the profession is determined by the active role of the teacher in relation to her profession, as well as the evaluation of and reflection on the results [21; 22; 24].

For some teachers, the new labor reality is a factor that stimulates professional development and becomes a source of growth and search for new meanings of pedagogy, contributing to professional fulfillment. But for a significant number of teachers self-adapting to such changes is a serious problem and it adds significance to the work of specialists in methodology in general education institutions.

Research in methodology in school has traditionally been considered as one of the main ways of self-education and professional self-development of the teacher. There are different approaches to defining the goals of research in methodology [6; 17; 19]. On the one hand, it is understood as a system of measures and interrelated activities of teachers aimed at the development of professional competence of teachers; it is a part of a continuous pedagogical education system and is regarded as in-service training. Research in methodology is a means of education management tool in a particular school, aiming at ensuring the high quality of education by increasing the professional level of teachers. The fact that the pace of development of educational practice is far ahead of the scientific solution of problems of education indicates that the demand for scientific and methodological support of the teachers in modern conditions increases signifi-
cantly. There is a need to find new formats of organization of methodological work of school.

The current situation in teacher education and its modernization require creation of a socially oriented educational strategy for a pedagogical university. University research at this stage contributes to modernization of general education, and scientific and methodological support for pedagogical collectives of schools. The effectiveness of transfer of innovation into the education system, will provide only the success of the modernization of general education in general, but also the practical implementation of the results of research projects conducted by scientists, teachers and students of the University, and their examination of educational practices, as well as the study of specific features of modern pedagogy.

Social and cultural environment in which educational institutions operate today are characterized by scientists as unstable and dynamic based on political, economic and technological factors. Continuous and rapid changes lead to constant transformations in the educational practices which have to adapt to new realities [10].

Without proper scientific and methodological support these changes are often inconsistent in solving complex problems associated with the changes in modern childhood, transformations of information-educational environment of school, the problems of inclusion, multicultural education, and others.

**Theory and practice integration**

Scholars refer to this process as “transfer” which is considered from the standpoint of improving practices through the introduction of scientific discoveries, new technologies, effective solutions to practical problems. Transfer of scientific knowledge and technologies in production, the best practices of attracting business partners to solving scientific and industrial issues are well represented in research and education in technical colleges. In this area, the implementation of modern forms of interaction are as follows: technology transfer centers, business incubators, centers sharing scientific equipment, industrial parks, special economic zones based on technology adoption [11; 15; 23].

The system of medical training has traditionally been based on integration of medical science, theoretical and practical training of students through setting up a university-supervised chair located at hospitals. Unfortunately, in Russia in-service teacher education has not become popular. Perhaps this situation is one of the reasons for the “gap” between theoretical and practical training of graduates of pedagogical universities.

The reasons for the interest of scientific and pedagogical community in this issue are related to the need to solve the contemporary problems of education and to apply the results of pedagogical research to practice. The interest of practitioners in the transfer of the achievements of science is explained, in our opinion, by the rapid pace of education reforms and, as a consequence, by growing requirements to teachers as professionals and rapidly changing reality of labor market and the growth of competition [16; 18].

A clear illustration of this idea is informatization of education that focuses modern teachers on suitable and effective integration of information technologies in educational process. Mastery of the use of information technology in education involves not only the practical aspect of teaching activities, but also eliciting concepts of modern didactics that reflect the requirements of the information society [11; 14].

In simple terms, transfer is a form of communication, a specially organized distribution channel of scientific knowledge in the practice. Transfer in education in the broadest sense is the target support of innovation in a real educational process [1; 5]. Today, there are a significant number of Russian and international publications which discuss various aspects of the theory and practice of transfer. Most often, speaking of transfer, researchers have in mind “transfer of technologies”, “information transfer” or “technology commercialization”.

According to the American researchers (the Association of University Technology Managers) the term “transfer” is associated with “the formal transfer of new knowledge and innovations gained from research work in universities and nonprofit research organizations into the commercial sector for their mutual benefit” [16].

Russian researchers usually separate commercial transfer (in which the consumer of information (technology) pays a fee owner (author, developer) and non-commercial transfer, in which
contractual relationship does not provide for compensation, and transfer is carried out by means of communication at conferences, seminars, exhibitions, through publications, training courses and internships.

**University-supervised chair as a means of theory and practice integration**

V.V. Titov considers technology transfer as “transfer of information of two types: a fixed, impersonal impersonal (articles, reports, drawings, etc.) that can be called knowledge and personal information which is non-fixed (and it is not only the technological know-how, but also non-verbal information related to the human factor in a variety of its manifestations)” [16].

The term “tacit knowledge”, proposed by Michael Polanyi [12], perfectly describes the effect of co-operation, which we managed to outline in the studies of interaction. The effectiveness of a university-supervised chair as a form of cooperation, in our view, is defined by the fact that along with explicit scientific and pedagogical knowledge traditionally acquired by the teachers in the course of scientific and methodological work, scholars and practitioners also get an opportunity to exchange implicit knowledge which is constructed by both cooperation parties directly; that enriches both scientists and practitioners on the basis of value-oriented approach.

In the most general sense research-based in-service programs imply the interaction of teachers, practitioners and researchers of the University, which reflects the degree of convergence of practices with research and development.

Innovation management researchers commonly state that younger sectors of the economy that emerged relatively recently are more knowledge-based than those that already exist for a long time and are well established on the market. With regard to education, this rule does not work, because the dynamism of social and cultural conditions of educational institutions and qualitative changes in the development of the student, the parent and child team lead to the fact that even the school that has a rich history, can not achieve high results without permanent changes in its activities or adaptation to new realities. It can be argued that high research intensity is an integral feature of a university-supervised chair [4; 7; 8; 9].

Mutually beneficial cooperation of school and university in in-service programs can be viewed from two perspectives, institutional (school-university) and personal (scientist-teacher). The institutions themselves benefit from the cooperation themselves and they base their goals on the cooperation which defines their agenda. The school receives a scientific and methodological support, providing professional development of teachers, increase their motivation to participate in the innovation and the university it is possible to implement in practice the new ideas in the field of education, the creation of experimental platforms, introduction of innovative technologies and bring to a research work of students, a new quality of the organization of pedagogical practices, etc.

Studying the problem of interaction and transformation of scientific and pedagogical knowledge and educational practices in the contemporary socio-cultural conditions makes it necessary to identify “points of intersection” interests of science and practice. As far as that scientific and pedagogical thought and practical pedagogical activity are comprise a certain domain in terms of technology and content, we may consider this integration process from the perspective of the term “transfer zone”. This approach is applied by I.V. Robert for informatization of education viewed as the transfer field of integration of scientific knowledge [3; 13].

**Methodology**

The study undertaken by the authors of the article aims at determining the transfer zones of interaction between the theory of education and educational practices within the framework of university-supervised chairs.

A set of methods was used to fulfill the aim of the study: practice analysis, focus groups, and interviews with school teachers and University scientists.

Practice analysis is carried out to identify the problems in research and methodology work at school that need support from University scientists.

Focus groups and interviews with school teachers, school principals, deputy principals serve as a basis for understanding teachers attitude towards the whole practice of cooperation between schools and Pedagogical Univer-
Study Results

Practice analysis shows that direct interaction between university and schools and institutions of supplementary education often develops during the period of student teaching practice. Each department of a university provides internship for students in a number of educational institutions of the city, among which the most powerful institution in terms of resources receives the status of a “backbone school for internship” for the relevant department. The capabilities of a university-supervised chair program organized by a university in a school can be much wider than just creating a space and conditions for pedagogical practice of students.

Interdisciplinary university-supervised chairs are focused primarily on scientific and methodological support to experimental and innovative activities of teachers. The primary tasks of interdisciplinary in-service programs are as follows: developing legal rules for the activity of specialists, identification of problem fields of general and further education, improvement of models of scientific and methodological support of the teaching staff, creation of innovative professional environment for the enhancement of the skills of teachers.

Specific subject university-supervised chairs are based on cooperation between school teachers and university faculty members who are focused on teaching a specific subject or methodology, in the first place. They address issues of educational content and methods, organization of extra-curricular activities on the subject and testing students’ performance in specific subjects, interdisciplinary achievements and personal growth.

The school-university cooperation in developing a university-supervised chair provides ample opportunities for the implementation of a holistic pedagogical research: identification of real problem areas of education, organization of research procedures, testing and registration of the test results, introduction of results of experimental work and evaluation of its effectiveness. Importantly, joint research by university faculty members and students in collaboration with teachers should be relevant to modern social trends and meet the requirements for efficiency and approbation.

In order to determine transfer zones of interaction between the theory of education and educational practices, the Department of Pedagogy of Omsk State Pedagogical University used the focus group ‘Teachers in a university-supervised chair in general education institutions’. The study was conducted by the authors in February 2016 in Omsk State Pedagogical University. The participants were teachers, school principals, deputy principals for scientific and methodological work of general education institutions where OSPU established a university-supervised chair in 2014—2015. University deans, heads of departments, and faculty members also took part in the project. During the discussion, two main thematic areas were considered. The first one was related to comprehension of the phenomenon of a university-supervised chair, and its distinctive features that provide a new quality of interaction of university and school. The second one referred to analysis of work of OSPU’s a university-supervised chair and their development prospects.

Based on the experience that has been accumulated during a year, the participants identified the following areas of methodological work in school, which can successfully be implemented by a university-supervised chair:

— scientific and methodological support of educational process in school,
— motivation of teachers to use innovations,
— implementation of new ideas in educational practice,
— introduction of innovative technologies in educational practice,
— improving professionalism of teachers,
— studying professional capabilities of teachers to meet requirements of professional standard “Teacher.”

The participants identified the most productive forms and methods of teaching and research of a university-supervised chair:

— research and methodology seminar,
— research advising,
— round tables, professional discussions,
— joint seminars and workshops with students and teachers,
— conferences,
— special interest groups consisting of teachers, university faculty members and students,
— distance interaction (through the OSPU’s educational portal “School”, networking, digital educational resources, webinars).

In interviews with school principals and deputy principals it was emphasised that distance cooperation is particularly promising, as it provides the possibility of rapid access to scientific and methodological information regardless of location. It was also noted that OSPU’s university-supervised chairs are created not only in the city of Omsk, but also in the areas that are far removed from the regional center. Distance interaction significantly increases the number of users of scientific and methodological information and creates conditions for professional communication.

Here is the summary of the results of focus groups and interviews that help to identify transfer zones as follows:
— research and methodology support of educational process in school,
— space for professional experience and continuous practice of students;
— motivating students and teachers to do research and use innovation;
— implementation of research results into educational practice;
— introduction of innovative teaching methods;
— improving professionalism of teachers;
— integration of the education community.

**Discussions**

OSPU’s experience in creating and maintaining a university-supervised chair on a systematic approach reveals that university’s research and methodology support of a university-supervised chair is a complex, multi-structural process that can be seen in three dimensions — functionality, content and context. The follow-up of this study could be related to providing a theoretical basis for the model of such university-supervised chairs. It would take into account different contexts in order to develop a strategy and regulatory framework for a university-supervised chair.

Certain difficulties are psychological barriers to inclusion in the new format of the activities of the representatives of the education community. According to the OSPU Department of Pedagogy setting up an university-supervised chair is a complex process that involves: coordination of positions and regulations, identifying problems and demands of specific educational institutions, formulation of objectives and expected outcomes for university researchers and educational school practitioners.

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В статье доказывается, что базовая кафедра университета в школе является новым форматом партнерства между педагогическим университетом и школами. Авторы анализируют социокультурные основания появления базовых кафедр и возможности для проведения школьными учителями качественной научно-методической работы. Авторы раскрывают характерные черты взаимодействия представителей кафедр и факультетов университета со школьными учителями в совместно реализуемых проектах, что способствует трансферу научных знаний. Научно обоснованная образовательная практика, взаимовыгодное сотрудничество, практикоориентированность обозначаются в качестве таких характеристик. На основе теоретического анализа и данных фокус групп о сотрудничестве ОмГПУ и областных школ посредством базовых кафедр в статье обозначаются «трансферные зоны», участники осуществления трансфера и формы сотрудничества. Подчеркивается, что такое сотрудничество будет успешным, если осуществляется междисциплинарными командами.

**Ключевые слова:** трансфер знаний, базовая кафедра университета, педагогический университет, научно-методическая работа, партнерство университета со школами, фокус группа.

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