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Initial teacher education in Russia: connecting theory, practice and research

Roza A. Valeeva  and Ilshat R. Gafurov

Institute of Psychology and Education, Kazan (Volga Region) Federal University, Kazan, Russia

ABSTRACT

This paper explores initial teacher education (ITE) in Russia, its organisation and content in the light of international literature. Changes in the political, socio-economic and cultural life of Russia in recent decades have defined a completely different model of teacher education. This model has evolved through key policy documents including the ‘Conception of pedagogical education development support (2013; <http://minobrnauki.rf/documents/3871>); ‘The teacher professional standard’ (2013; <http://www.rosmintrud.ru/docs/mintrud/orders/129/>), and, in 2014, the ‘Comprehensive programme to improve the professional skills of educational institutions teaching staff (http://www.consultant.ru/document/cons_doc_LAW_166654/). These documents have led to important changes in teacher education policy with serious consequences in terms of structure and curriculum. A key objective of this paper, therefore, is to examine the structure and curriculum of ITE in Russia within competency-based approach. The article also explores how the research dimension is integrated in ITE programmes, as well as new concepts and approaches linking theory and practice. In outlining the new model, the approach to teacher education followed by Kazan Federal University is used an illustrative example.

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Introduction

The innovation of teacher education has become a pressing issue both in Russia and across the globe, and its purpose and goals need to be reconsidered in accordance with current and future contexts. Questions arising from this include the intersection and connection between the modernisation of education and the transformation of society as a whole; how the system of initial teacher education (ITE) should be reformed in order to achieve new goals and what we can expect from teacher education amidst all the changes that are taking place in Russia and internationally. Some answers to these questions can be found in the research of teacher educators from around the world which have informed the thinking and approach adopted in Russia in recent years (Collinson et al. 2009; Elstad 2010; Flores 2011; Childs and Menter 2013; Donitsa-Schmidt and Weinberger 2014; Woolhouse and Cochrane 2015; Menter 2016; Friese 2016; Maschke and Stecher 2016).

In recent years, ITE has been considered a panacea for the effectiveness and improvement of education, teaching and learning in schools. International literature describes the reformation processes in ITE taking place in different countries (Day 1999; Flores 2011; Imig, Wiseman, and Imig 2011; Goodwin 2012; Hammerness, van Tartwijk, and Snoek 2012; Mayer, Pecheone, and Merino 2012; Darling-Hammond 2012; Ellis and McNicholl 2015). Russian society has undergone, and continues to experience, political, socio-economic and spiritual transformations in recent decades and as a consequence, it has become critical to rethink the ways of increasing the effectiveness of education (Gorshunova 2002). As part of this, teacher education has a special place and fundamental role in the modernisation of Russia's education system. In light of the transformation of society, this education needs to be reconsidered addressing the role of teacher education.

There are contradictions in the process of reconstruction in international ITE. On the one hand, there is a trend connected with giving a Master's degree level to future secondary school teachers (for example, Finland, France, Malta and Portugal). On the other hand, there are short ITE programmes in the UK, USA and Australia (Flores 2016). In Russia, it is even more complicated: secondary school teachers may have both Bachelor and Master degrees.

The system of teacher education in Russia is oriented towards one of the biggest education markets: it prepares educators for more than 140,000 schools and educational institutions with a variety of specialisations which serve 372.7 million pupils and students annually. Currently, 279 higher-education institutions across Russia prepare over 438,000 pedagogical specialists.¹ The teacher education workforce is estimated at 80,000, consisting of lecturers, instructors, teachers and so on. Teaching remains an attractive profession with the number of applicants exceeding the number of places available (in 2016, the number of applicants was 7.7 times higher than the number of available places in pedagogical programmes; in 2015 the figure was 7.1). The quality of applicants continues to improve as well with the proportion of applicants to pedagogical programmes with school examination scores higher than 70 consistently growing (36% in 2015 and 46% in 2016), whereas the number of applicants with scores lower than 56 is decreasing (19% in 2015 and 15% in 2016).²

The present Russian system of teacher education prepares specialists to work in a variety of educational institutions: pre-schools (including specialised), primary schools, general secondary educational organisations (including lyceums, gymnasiums, grammar schools, etc.), professional educational institutions (vocational and higher education establishments); special schools for persons with disabilities; retraining and advanced training organisations. Apart from educational institutions, educators are also often involved in organisations that have other orientations: social (adult education, employment services, pension funds, services that provide social and psychological support to child refugees, organisations that work with delinquent youth, juvenile offenders, with those who are homeless and who have addiction problems) and managerial; family education and development.

Teacher education in Russia is a historically changing problem. It has been greatly influenced by its evolution from the Tsarist and Soviet eras to the more democratic and decentralised approaches of recent decades. Its roots lie in the end of the eighteenth century but its formation relates to the emergence and development of open comprehensive schools and the spread of general education throughout the country in the nineteenth century (Eskin 1952; Pletneva 1997; Osovski 1959). Historically, teacher training in Russia was carried out in academic universities where special pedagogical institutes were opened at the beginning of the nineteenth century (Kazakova 1995; Knyazev 1989; Mikheeva 1985). Later from

those institutes, autonomous teacher training institutions were introduced in Russia and then the tradition was followed in the Soviet Union (1917–1991) (Vasilyev 1966; Panachin 1979; Shcherbakov 1968; Slastenin 1976). Due to the 1990s recession, there has been a considerable decline in the state support for higher educational institutions and this has caused stagnation. For this reason, many of them were reformed by mergers with ‘classical’ universities as a means of rationalising resources but also to draw on the powerful educational and scientific potential and best equipment for the education of teachers (Bolotov 2001).

Reform of the education system in the last 20 years has resulted in a raft of legislative and regulatory acts, which acknowledged the need to renew education. In relation to teacher education specifically, in 2014, the ‘Conception of teacher education development support’ was accepted which underlined that initial teacher training, in-service training and professional retraining lie at the heart of the reform (Conception, 2014). This was preceded a year earlier (2013) by the adoption of ‘The Teacher Professional Standard’. The aim of this ‘Teachers’ Standard’ is to establish uniform requirements for the content and quality of vocational educational activities, to assess the level of qualification of teachers in employment and certification for career planning; the formation of job descriptions and development of federal state educational standards of teacher education.³

These policy initiatives have sought to ensure the necessary conditions for bringing the system of professional pedagogical education in line with the latest achievements in pedagogical theory and practice and the formation of professional competency in the process of pedagogical training. In 2014, a major project was launched by the Ministry of Education and Science of Russian Federation for the modernisation of teacher education. Its main objective was to provide teacher training in accordance with the professional standard of the teacher and the federal state educational standards of general education (Bolotov, 2014). In its first phase, the modernisation project aimed at overcoming existing pedagogical education problems including use of educational technologies; traditional transmission approaches in learning and teaching and the absence of a system of independent assessment of the quality of future teachers’ training. Forty-five universities across Russia became involved projects to modernise teacher education at the inter-regional level (Bolotov et al. 2015).

The aim of this article, therefore, is to provide a critical insight into the Russian system of pedagogic education; to identify and highlight the specific features of the process of professional competence development; to ascertain how theory and practice can be combined effectively and to consider how future teachers can be involved in research activities. These problems have been broadly discussed in the perspective of many countries (Conway et al. 2009; Flores 2016). But the specifics of the Russian teacher education and its main developmental trends have not yet been analysed in detail in scientific journals. Due to space limitations, the detailed analysis of similarities and differences of the Russian and international ITE is beyond the scope of this article. As part of the study which has informed this article, a complex variety of research and analytical methods, complementing each other, were used. This includes analysis and synthesis of the regulatory, legislative, instructional and teaching papers and materials on management and procedure studies on teacher education modernisation in Russia as well as study and generalisation of innovative teaching experience. As an illustrative example, we discuss the Kazan Federal University (KFU) model of teacher education. The main data sources are the reviews and subsequent teacher education

regulations and policy documents in the Russian Federation and research papers on teachers' professional skills improvement programme.

The Kazan approach – a new model of teacher education at KFU

KFU is one of the oldest in Russia and has contributed significantly to education and science in the country throughout its 212 year history. Today KFU is one of the 10 largest universities in Russia with 45,000 students and postgraduates and offering 57 educational majors.⁴ KFU has lived through several transformations since its establishment in 1804, the latest of which started in 2010 and is a part of a wider framework of higher education reforms in Russia. Priority areas for development were identified as part of KFU's innovation programme – teacher education was one of these. 'Teacher 21' (the full title is 'Quadrature of Transforming Teacher Education') was one of four Strategic Academic Units (StrAU) approved by the university's 'International Council'. The goal of the 'Teacher 21' StrAU is to design and develop a system of reflective and research-oriented teacher education and to implement a new structural and functional model of teacher education at a classical university.⁵

The decision to prioritise teacher education as one of the four StrAUs was a significant decision for KFU as teacher education had not been prioritised in this way previously and its selection as one of the StrAUs served as an indicator of importance attributed to it, alongside the other areas selected: medicine and science; petroleum and petro-chemistry; and space technology and information technology. As such, KFU is the first classical university in Russia seeking to create a new model of teacher education alongside the previously existing model of teacher training universities that has remained unchanged for several decades.

The first stage in this innovation and development process was the merger, in 2011, of two pedagogical universities with KFU, one in Kazan and one in Elabuga, a city 200 km to the east of Kazan. It was one of the first such mergers in Russia and as a result of it, KFU became the third largest teacher training institution in the country. KFU is now one of the few Russian universities to offer all the levels of teacher education and teaching majors in all the subjects of the current secondary school curriculum (Kalimullin 2014a, 2014b). Sixteen per cent of students in KFU now major in teaching.

Initially, the merger with the pedagogical universities was problematic and generated much controversy due to the remodelling and reorganisation of how teacher education was delivered at each site. At the main site in Kazan, the traditional system was replaced with newly established pedagogical divisions within most of the institutes. Each institute thus became a centre for teacher training in its respective subject. Underpinning this strategy is a belief that immersion in the academic subject area, when future teachers study most of the time with specialising students, is a key factor in increasing professional competence. This approach also provides ready access to the latest research and practice laboratories, including those that model the educational process in secondary schools. In the satellite site at Elabuga Institute, it was decided that the traditional system of education would be preserved but with more financing allocated to staff training, equipment, talent recruitment, facilities renovation and internal employee mobility.

The process of designing and implementing this reform programme generated much discussion about what takes priority in teacher preparation programmes – subject education or psychological and pedagogical training. In the model developed at KFU, students who

major in education have joint supervision through their profiling institute (such as Institute of Physics, Lobachevsky Institute of Mathematics and Mechanics, and Institute of Fundamental Medicine and Biology.) and the Institute of Psychology and Education that is in charge of training in its respective areas. The reform programme is ongoing and KFU is currently transitioning to an integrative model of teacher education where undergraduates in classical majors (such as physics, chemistry and biology) can transfer to teacher education after their first or second year. Such a transfer would be impossible in teacher training universities / pedagogical universities because classical majors are not available there. Internal students' surveys at KFU show that such an opportunity is valued by students who often make errors in judgement when choosing where to enrol.

Another way to enter the teaching profession in Russia is to choose one of the various programmes of advanced professional re-training. At KFU this is offered to seniors during their fourth year or after graduation. The experience at KFU shows that undergraduates in teaching also often choose such programmes, for example, in psychology, foreign languages and continuing education.

The reform programme is ongoing and the establishment in 2017 of a new Centre of Masters Programmes in Pedagogy at the Institute of Psychology and Education is an important development. Creating a unified centre of responsibility allows for individualised masters programmes, to increase variability and to improve quality control. This also facilitates a rationalisation of provision as the flexibility of enrolment means that unpopular programmes can be phased out.

The concentration of such opportunities at KFU is leading to the formation of a unique infrastructure of teacher education. KFU now has one of the most comprehensive systems of continuous teacher education in Russia, starting with the Children's University and lyceums for gifted children (IT Lyceum and Lobachevsky Lyceum) – both under direct administration of the University, and ending with the Volga Regional Centre for Advanced Training and Professional Retraining. Resources are sufficient for funding a wide array of teaching activities for school children, be it through the Children's University and the Small University, special educational TV programmes, the planetarium, Russian and international contests, or other means.

The reform programme has also brought about changes in the nature and direction of the work of educational researchers at KFU. This research is an integral part of the wider framework of the educational process at the University and serves as the basis for pedagogical innovations on all levels. A new regional centre of the Russian Academy of Education that has been established at KFU is also a progressive form of cooperation between a research organisation and a university. KFU will provide the infrastructure and serve as an experimental site for implementing new methods of teacher education. In 2014–2015, KFU was part of three projects (out of 23 all-Russia projects) within the Programme of Modernisation of Teacher Education in Russia. KFU now is responsible for 75% of teacher education and advanced training in the Republic of Tatarstan. More than 7000 teachers undertake continuing professional development courses each year offered by KFU and funded by the regional ministry. To promote this cooperation further, a Coordinating Council on Pedagogical Education has been established, co-chaired by Rector of Kazan University and Minister of Education and Science of Tatarstan. The Council approves changes in elective parts of curricula, administers employer-sponsored education, commissions research at secondary schools and recommends changes in state-funded enrolment. For instance, currently a joint

experiment is underway in pedagogical masters programmes aimed at satisfying the latest demands of secondary education.

Teacher education at KFU is currently part of a significant programme of change and innovation, a key element of which has been the uniting of a classical university and pedagogical universities, their traditions and approaches. Teacher education was first regarded as a sort of a liability that impeded our international competitiveness. It was thought that only natural sciences could change KFU into a research university and make it known all over the world. Nowadays, it is identified as a priority area for strategic investment and support, both within the university and by the federal authorities, and is evolving to one of the advantages of Kazan University. These changes in ITE are discussed within one university with a long historical tradition and which is not isolated from the whole Russian context of renewing the educational system in response to the new needs and requirements. This should help to fully understand the main trends of its development in the international context.

Trends and issues in international and Russian teacher education

In recent years, the issue of teaching quality and teacher education has attracted the attention of many researchers all over the world (Flores 2011; Childs and Menter 2013; Donitsa-Schmidt and Weinberger 2014; Woolhouse and Cochrane 2015; Brante et al. 2015; Menter 2016; Friese 2016; Maschke and Stecher 2016). The insightful analysis of the ITE within and across five national contexts (England, Northern Ireland, Scotland and Wales and the Republic of Ireland) is given in the book 'Teacher Education in a Time of Change' (2016). The book is written by Teacher Education Group (TEG) and covers the policy turn in teacher education, new standards for teaching and outcomes-based educational accountability. Much attention in the chapters of this book is paid to the practice turn as well as to the consolidation and strengthening of the university in ITE.

A cross-national study of teacher education in nine countries (Ireland, Northern Ireland, Scotland, England, Finland, USA, Poland, Singapore and New Zealand) discusses the problems of the ITE quality, knowledge integration and professional values in those countries (Conway et al. 2009). Significant transformations of ITE in different countries are always connected with the changing approaches to teacher professionalism in accordance with the new challenges, increasing roles and responsibilities of teachers. Flores (2016, p. 190) identifies among them 'the multicultural settings in which teachers have to work and a broadening of their role, which goes beyond the traditional boundaries of subject matter; changes occurring in social agencies; greater influence of the mass media in the education of children and young people; the co-existence of different educational models in a multicultural society; the fragmentation of teachers' work; growing opportunities for learning outside school owing to the development of information and communication technologies; and, the increasing accountability, bureaucracy and public scrutiny'.

In this context, Evans (2011) discusses the 'performative professionalism'. The main features of the changes within this approach are intensification and bureaucratisation leading to decrease in teacher motivation and job satisfaction on the one hand, and to increased level of teacher stress and burnout, on the other (Flores 2016). In contrast there is a more productive positive notion of teacher professionalism including teachers' ability of learning, participation, collaboration, co-operation and activism (Sachs 2000). Flores (2012) considers

that the teacher professionalism should include sense of agency and moral values with the professional relationships with ethical and social dimensions being its key element.

In Russia, the challenge of teacher education modernisation along with the development of pedagogical competencies and professionalism has been considered in many works (Bolotov 2001; Parinova 2003; Bepalova 2003; Balakireva 2008; Bondarevskaya 2010; Gorbunova 2010; Valeeva 2015). However, in Russia, there are different approaches to the study of the future teacher's professionalism. Some researchers (Slastenin 1976; Panova 2009) consider professionalism from the standpoint of the personality of the teacher; Kuzmina (1965) and Zagvyazinsky (1986) – from the standpoint of his/ her activities, while others (Abdullina 1990; Shiyarov 1991) – from the standpoint of effectiveness of teacher education in pedagogical high school.

Bolotov's (2001) research is a theoretical and experimental study of the problem of reforming teacher education in Russia in times of social change. He presents the management of innovative processes in teacher education. Criticising the existing approaches to the development of the system of teacher education and professional development in Russian teacher training universities in Volgograd, Krasnoyarsk, Moscow, St. Petersburg and Tula Bolotov substantiated the mechanisms of orientation to pedagogical activity and linking theory and practice.

This aspect of teacher education has been considered across the globe (Woolhouse and Cochrane 2015). School–University partnership is one of the ways of making this practice effective. For example, the Oxford University Deanery builds links with the Oxfordshire's state secondary schools, increasing the potential for research partnerships and encouraging more professional development for experienced teachers (Fancourt, Edwards, and Menter 2015). A 'clinical model' of teacher education was developed at the University of Glasgow in 2011. The common focus of this model is on the key function of the practicum, on 'teaching schools' and on the roles and responsibilities of the various players in teacher professional learning (Conroy, Hulme, and Menter 2013). The Portuguese experience of collaboration and professional development in the workplace has also been explored in the literature (Forte and Flores 2014). At the same time, there are researches revealing the difficulties in integrating theory and practice (González 1995).

Completely new approach to teacher education is presented by Parinova (2003). The researcher who developed this productive-generalising approach to teacher education considers it as a system of methods and techniques aimed at actualising the internal resources of the student teacher. The result of the realisation of the productive-generalising approach to pedagogical education is the personality of the future teacher with its value orientations and spirituality, the productive generalisation and experience of creative activity, the success in mastering the profession. In turn, Balakireva (2008), in her research on the 'Professiological basics of teacher education', justified the qualitative renewal of the content and process of teacher education due to the essential changes in the teaching profession. She developed the model of implementation of the 'professiological' approach in teacher education.

This approach is linked to one of the most relevant trends in the international teacher education – research-oriented study. When studying pedagogical reality, teachers gain a better understanding of it – they not only systemise their knowledge about it, but also develop their professional style and worldview (Elstad 2010; Margolis 2014; Menter 2016). Conducting research enables teachers to educate themselves as well as to find like-minded people – to find people who are interested in the same problems. Those graduates who

manage to distinguish themselves as talented researchers over the course of their university years later find it easier to get a job, they receive better offers and then gain promotion more quickly (Gorbunova 2010).

Over the last decade, there has been a shift towards radically new value orientations, priorities and goals in teacher education has been noticeable all over Russia: the model of a subject teacher, prevalent in 1970s–1980s has been replaced by the model of a teacher–researcher and teacher–technologist who specialises in a specific professional area (1980s). This model was later enriched by the features of a humanitarian teacher – a highly cultured educator who is capable of addressing, not only educational issues, but also social and cultural (1990s) (Shiyanov 1991; Isaev 1993). Thus, Drozdikova-Zaripova and Kalatskaya (2016) studied social and professional values of teachers in the Republic of Tatarstan (Russia) at various levels of teaching experience. They revealed teachers' specific values on the basis of axiological and competence-based approaches.

Recently much stress has been placed on nurturing analytical abilities and self-reflection in future teachers and the ability to construct pedagogical reality (Bondarevskaya 2010; Biktagirova and Valeeva 2014). A look at international contexts indicates that in many countries (USA, England, Scotland, Australia, France, Germany etc.) a certain amount of competences for teachers and teacher education has been identified (Townsend 2011; Hulme and Menter 2008; Struyven and De Meyst 2010; Menter and Hulme 2011; Hammerness, van Tartwijk, and Snoek 2012; Page 2015). According to Menter and Hulme (2011) Scottish standards are related to the traditional values placed on teacher professionalism. Whitty (2014, 471) calls the new teaching standards in England 'an official "national" professionalism'. The government white paper *The Importance of teaching* introduced the so-called 'craft' model of teaching including first of all practical skills for classroom work. The Scottish model with the wider view of teachers' role in the classroom is presented in the report *Teaching Scotland's Future* (2011). The concept of teacher education proposed by Struyven and De Meyst (2010) includes linking theory and practice, and preparing students for employability and for life-long learning.

As for Russia, all the requirements for particular educational levels, professions, specialisations and fields are determined by the Federal executive authority which functions as a body developing national policies and legal regulations in the educational sphere. These requirements are reflected in the Federal State Educational Standards. Thus, as a result of completing a Bachelor's programme, a graduate has to have a range of competences: general cultural (GCC), general professional (GPC) and professional (PC). Professional competences are listed in the educational standard in sets corresponding to particular specialties towards which Bachelor's programmes are orientated (Table 1).

The Federal State Educational Standards sets out the range of professional competences which graduates of pedagogical Bachelor programmes in Russia should have attained and which includes 9 general cultural competencies, 6 general professional and 14 professional competencies. The teacher education curriculum is designed to enable attainment of these competences progressively which is now considered.

Thus, all the abilities acquired by students can be grouped into two large categories: the abilities to learn and to interact. These are inter-related, but for the sake of convenience we will view them separately.

The ability to learn is the most important ability in the teaching profession. It involves using one's intellectual potential in order to address professional tasks. Developing this

Table 1. The Federal state educational standards for higher professional education on the required competences of the graduates.

Competences	Graduates should demonstrate the ability to:
General cultural competences (GCC)	<ul style="list-style-type: none"> • Utilising basic philosophic and socio-humanitarian knowledge necessary for forming the scientific view of the world (GCC-1). • Analysing the main stages and patterns of historic development in order to be able to encourage the development of patriotism and civic position (GCC-2). • Using natural-science and mathematical knowledge in order to be able to navigate in the modern informational space (GCC-3). • Communicating orally and in writing in Russian and in other languages for the purposes of effective interpersonal and intercultural interaction (GCC-4). • Working in a team, to be tolerant towards social, cultural and personal differences (GCC-5). • Self-organisation and self-education (GCC-6). • Using basic legal knowledge in a range of contexts (GCC-7). • Maintaining physical fitness necessary to engage in professional activities (GCC-8). • Administering first aid and take protective measures in emergency situations (GCC-9).
General professional competences (GPC)	<ul style="list-style-type: none"> • Understanding the social significance of one's future profession, to have the motivation to work and carry out one's professional duties (GPC-1). • Teaching, supporting and developing students in accordance with their social, age, psycho-physical and individual characteristics as well as their special educational needs (GPC-2). • Enhancing the educational process with psycho-pedagogical support (GPC-3). • Engaging in professional activities in accordance with regulatory legal acts in the sphere of education (GPC-4). • Working in accordance with high ethical principles and speak in accordance with the standard of speech (GPC-5); • Ensuring safety of students during the educational process (GPC-6).
Professional and cultural competences (PCC)	<ul style="list-style-type: none"> • Realising educational programmes for particular disciplines in accordance with the educational standards (PC-1). • Applying state-of-art educational methods, technologies and assessment practices (PC-2). • Facilitating the spiritual and moral development of children in the course of extracurricular activities (PC-3). • Identifying and taking advantage of opportunities arising from the educational environment and activities in order to achieve personal, subject and meta-subject goals and to ensure the quality of education through teaching a particular subject (PC-4). • Ensuring pedagogic support for students in order to help them socialise and acquire a professional orientation and aspirations (PC-5). • Effectively interacting with all the participants of the educational process (PC-6). • Organising students' cooperation, to support their proactivity, initiative and autonomy, to help them develop their creativity (PC-7). <p>In the course of project-oriented work students acquire the following abilities:</p> <ul style="list-style-type: none"> • Designing educational programmes (PC-8). • Designing individual educational routes (PC-9). • Planning one's professional growth and personal development (PC-10). <p>In the course of research work students acquire the following abilities:</p> <ul style="list-style-type: none"> • Using systemised theoretical and practical knowledge in order to set and achieve research goals in the field of education (PC-11). • Organising and managing research activities of their students (PC-12). <p>In the course of culturally enlightening work students acquire the following abilities:</p> <ul style="list-style-type: none"> • Studying and form the needs of different social groups in culturally enlightening activities (PC-13) • Developing and implementing culturally enlightening programmes (PC-14).

ability means learning how to manage one's time, plan and manage one's activities, search for necessary information, select appropriate methods of work and collaborate with others effectively. Within the given context the usual meaning of learning is enhanced – this means transitioning from just learning to learning collaboratively which involves mastering a variety of general socio-cultural abilities (Margolis 2014).

The ability to interact is also fundamentally important. At university future teachers have an opportunity to foster relationships with fellow students and with their instructors. They need to get to know these people around them because in the course of their professional work they will inevitably come to interact and work with very different people (Kuzmina 1965). The ability to work in a team is highly important for a teacher. Seminars and collaborative assignments facilitate the development of this ability through developing the ability to include others in the process of working on one's tasks; to mediate and resolve conflicts; to time manage and plan one's work; to review and correct the work of others; to compile a range of materials and works into one collective product.

Challenges and tensions in ITE in Russia in the light of international trends

As teacher education in Russia has evolved in recent decades there have been two main developmental trends – traditional and innovative. Higher pedagogical education in Russia, (that is, teacher education which is delivered through pedagogical programme in a higher education institution/university), along with the whole education system of higher education, have been organised in accordance with the principle of narrow specialisation. The structure and curriculum of traditional teacher education are aimed at preparing educators as specialised subject teachers. Within the traditional system the educational process has central place and the relations between different educational participants are organised as subject–object (the teacher is the subject of the educational process and the student is the object who passively receives information). Subject preparation is viewed as the final goal of teacher education in the traditional system (Slastenin 1976; Abdullina 1990). The ongoing development of this system involves 'perfecting', 'quality improvement', 'radical renewal' but without changes in the organisational model, content and structure of the educational process. In terms of content the traditional model was based on the interrelationship of two independent activities – the teaching work of the teacher and the learning activities of the student; students act and are viewed as controllable objects. The main goal in these processes is to transfer subject knowledge; the informing and controlling functions of the teacher are viewed as central; the organisation of educational activities is aimed at reproduction. (Kuzmina 1965). Within this model, dominant features in the educational process include imitation; social and interpersonal interactions are repetitive; external control and assessment results are prevalent – all of which undermines learning motivation.

The current system of pedagogical education in Russia is designed to facilitate teachers' continuing development in line with their level of education, qualification and teaching experience. The flexible and elective nature of the system enables everyone to independently navigate their professional progress (Khromenkov 2015) with a greater focus on pedagogical specialism and greater engagement with research as they advance through the different levels.

Teacher education curriculum

The curriculum orientation of international ITE programmes differs according to the cultural, social and historical differences in the European Union and elsewhere. It depends greatly on the philosophies of education and the conceptions of teachers' role. Although different conceptions co-exist but the prevalent model is curriculum orientation on the content to be taught and goals to be met (Flores 2016). There are two international models of ITE curriculum: the concurrent model, in which the general and professional components are delivered concomitantly; and, the consecutive model, in which the professional component follows the general component (Piesanen and Valijarvi 2010).

In Russia under the current model, Bachelor's degree programmes in education consist of a mandatory (foundation) part and a variable part. This organisation makes it possible to provide different Bachelor programmes together within one orientation. Thus, becoming a teacher is part of a process of mastering disciplines that are grouped into different cycles among which the professional cycles takes up the main place. The disciplines of the professional cycle take up $\frac{3}{4}$ of all the time assigned to the foundation part. Programmes with different specialisations have almost the same set of foundation disciplines within the cycles of natural sciences and social sciences. The professional cycle focuses firstly on different aspects of culture, education and social sciences (as three main pedagogical orientations) and secondly on specific subject-related disciplines that prepare future educators for teaching their subjects.

The pedagogical module usually starts with the discipline 'Introduction to the teaching profession' which aims to highlight the nature and values of teaching. Moreover, through this module, students get familiarised in detail with the expected competence levels, the system of education and with the national educational policies. Then students learn the history of education tracing how pedagogical theory has evolved. They also learn teaching methodology and how to organise pedagogical research projects. They focus on both educational theories and practices and then move on to focus on social pedagogics and education management. Apart from theoretical lessons, students also engage in practice-based activities which enable them to analyse different pedagogic situations and master different psycho-pedagogical assessment and control methods.

At the same time, we should notice that difficulties exist in updating and applying the knowledge gained by future teachers; mosaic, unstructured data of knowledge, lack of holistic ideas about professional pedagogical activity, its object, subject and educational process.

Linking theory and practice

Linking theory and practice in ITE is of great importance internationally (Korthagen, Loughran, and Russell 2006; Van Nuland 2011; Flores 2016). It is one of the major issues in ITE, but at the same time it is noted in international research that disconnection exists between theory and practice (Flores 2016). Although practice is recognised as a core element in ITE curriculum, there is no consensus about its goals, strategies and required competences (Flores 2016). Duda and Clifford-Amos (2011), in their final report on ITE in six countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine), point out that the curriculum

includes more specific subjects rather integrated programmes of study. Meanwhile it is necessary to support classroom practice and research in the curriculum.

Teacher education in Russian universities is of two types: systematic and situational (when knowledge and skills are acquired as the necessity for them arises). Only the systematic type allows for the realisation of the chosen professional educational strategy effectively. The educational process in higher education institutions is organised so that to offer a range of educational forms: both theoretical (lectures) and practical (seminars, laboratory-based works, practicum and internships).

In Russia, pedagogical practice enables prospective teachers to interact with children and provides opportunities to apply the concepts of humanistic education and the ideas of person-centred approaches (Kolodkina 2005). Over the course of pedagogical practice student teachers learn by engaging in professional activities which allow them to establish themselves within the chosen profession. The main goal of a pedagogical practice is to help student teachers gain an insight into the teaching profession and to form a full picture of what it is like to carry out professional duties.

The main aims of a pedagogical practice are the following:

- to enhance professional erudition and to deepen psycho-pedagogical knowledge, abilities and skills;
- to develop creative thinking and personal teaching style;
- to acquire first-hand situational experience;
- to realise one's needs in self-development and systematic self-improvement.

At the same time, the training of teachers to solve practical problems of professional activity is carried out non-systemically and mainly on a narrow methodological level. Excessive technology, an abundance of methodological prescriptions leads to the inconsistency of the creative component of the teacher's professional training. As a result, the student teachers are not ready to develop their own strategies and decision-making tactics in the specific conditions of professional situations. This is a problem yet to be solved in the Russian teacher training institutions.

Research-oriented study

The implementation of research in ITE has been internationally identified as a key element in its development and improvement (Niemi and Nevgi 2014; Kansanen 2014; Munthe and Rogne 2015; Flores 2016). In the international ITE programmes the research component has taken different forms. Flores (2016) notes that 'in some cases it is non-existent; in other cases it is not explicit in the curriculum but it is up to the training institutions to foster the development of student teachers' research competences, for instance during practicum; and, in other cases an explicit curriculum unit on research methods is included in the curriculum as well as an inquiry approach to the practicum.' (p. 212).

In Russia, modern educational programmes provide students with opportunities to engage in a range of various research projects: end-of-term research projects, final research projects, additional research projects for contests. If students are proactive and enthusiastic about participating in research from the very beginning, then it makes it easier for them to write their final qualification thesis.

The following items can be viewed as *the main aims of organising student research* in the Russian teacher training institutions:

- encouraging the interest towards research and helping students develop their ability to plan and conduct research independently;
- facilitating the development of creativity and professional autonomy as well as the enhancement of theoretical knowledge;
- *identifying the most promising and gifted students and directing their potential at addressing relevant issues in pedagogical sciences;*
- preparing the most talented of students to become future researchers who will be able to develop pedagogical sciences in future.

The main *forms of student research work* in the Russian teacher education institutions are:

- classroom-based works organised as parts of seminars;
- individual consultations (the work of individual students with their supervisors and other professors who are involved in research);
- group work of students oriented at solving particular research problems in collaboration;
- academic conferences and competitions;
- school-based research activities that can be carried out over one's pedagogical practice:

The main *types of student research works* are:

- academic literature review;
- the organisation of the materials gained through literature review;
- the selection of relevant literature;
- writing summaries, essays and reviews;
- writing a conference papers;
- writing an academic article;
- preparing methodological guide materials concerning important professional issues;
- writing reports and presenting the results of one's pedagogical practice;
- designing didactic materials and electronic educational resources;
- writing a term thesis, final qualification thesis, etc.

Pedagogical research in the Russian teacher education universities is one of the most accessible fields for aspiring scholars. This can be explained by the following:

- students can try out the roles of both examiner and examinee in their educational process subjecting themselves to being tested and pedagogically influenced as learners and then also taking the position of an educator who is in charge of research;
- pedagogical research projects usually do not require any special equipment; the object of study is real educational process which is already happening around students;
- pedagogical universities provide opportunities for students to engage in pedagogical practices which enable them to carry out the full research cycle (starting from choosing a topic, forming a hypothesis, then testing it out and finally drawing appropriate conclusions).

Thus, Education at Master's level is directed at organising educational research activities in order to teach future specialists to conduct research projects, to analyse and present their findings. This level is available at universities and has a range of specific characteristics. First

of all, over the course of studies students are mainly engaged in independent work supervised by their academic adviser. In comparison to specialist degree programmes, the amount of classroom-based hours is lower but instead students have an opportunity to explore in-depth a specific topic/issue within the chosen profession. Secondly, master's students go through writing and defending a dissertation that has to have academic novelty, depth and independently collected evidence. Research work in the Russian teacher education universities helps students acquire problem-solving skills; it fosters the development of their professional interests and creativity. When engaging in research activities students cross the boundaries, gain deeper understanding of theories along with their practical applications, contemplate their future perspectives and come to see the value in their professional and personal development.

However, the students' pieces of research are often contradictory, chaotic and lack reflection. The studies are incomplete, and indifferent to the professional development of the researcher himself/herself. In addition, their incompetent actions have a negative impact on the processes of 'capitalisation' of scientific knowledge, significantly reducing their effectiveness and impoverishing the resource base for the development of education and modern pedagogical science.

Conclusion

The system of ITE in Russia performs not only the executive but also the pioneering function of preparing specialists for the continuously developing system of education. This development is influenced by global trends and research in education. The policy focus on teacher education and teacher quality is currently a priority in the world and forms the backbone of the whole education system which:

- facilitates the formation of competent and autonomous pedagogues who are capable of dealing with challenges in an independent and creative way and, at the same time, who are aware of the personal and public importance of pedagogical work and who are prepared to take responsibility for its outcomes (Flores, Fernandes, and Pereira 2014; Menter 2016);
- supports social stability and facilitates the development (Collinson et al. 2009; Elstad 2010);
- defines the quality of the specialists and their professional preparation for supporting the social stability and facilitating the development of society (Childs and Menter 2013; Friese 2016).

The most urgent problems to be solved in teacher education in Russia are: strengthening the practical orientation of professional training; promoting the resource support of the educational process and research activities; development of a flexible system for updating educational programmes that meet the needs of the market; bringing the system of professional pedagogical training in line with the latest achievements in pedagogical theory and practice.

The modernisation of teacher education in Russia, and at KFU in particular, is directed towards remodelling and reorganising teacher education in alignment with these global aspirations for 21st educators. Thus, the modernisation of teacher education in Russia is focused on the broad aims of improving the socioeconomic status of the teachers and the

creation of a system for developing the motivation of teachers to improve the quality of pedagogical activity. The formation of a unified system for monitoring the effectiveness of teacher education, based on an analysis of the success of graduates' pedagogical activity, is part of this, as is involvement in the modernisation of teacher education of broad social strata, as well as the main social institutions of socialisation of the child. The critical role of teacher education in the development of society and the state is recognised by the pedagogical community as part of a new model which sees the convergence of scientific and pedagogical institutes with real pedagogical practice, involving scientists in scientific and practical support of educational processes in general educational institutions. This collaborative model of teacher education extends beyond the university to directly involve teachers in schools in the pedagogical education of teachers. In summary, teacher education in Russia and at KFU is on a journey towards a new conceptual model of teacher education, which connects and integrates theory, research and practice in new and innovative ways. This has required a reordering and restructuring of traditional approaches to the preparation of teachers and their ongoing development. The goal in adopting new approaches and structures has been to preserve the rich heritage of the Russian model of teacher education as it has evolved from the eighteenth century while developing approaches that will ensure Russia's teachers and teacher educators are fully prepared for teaching in schools in the twenty-first century and are aligned with international models.

Notes

1. <http://xn--80abucjiibhv9a.xn--p1ai/%D0%BD%D0%BE%D0%B2%D0%BE%D1%81%D1%82%D0%B8/8951>
2. <http://www.ug.ru/news/19503>
3. <http://www.rosmintrud.ru/docs/mintrud/orders/129/>
4. <http://kpfu.ru/eng/about-the-university/history>
5. <http://teacher21.kpfu.ru/en/>

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Notes on contributors

Roza A. Valeeva is a Russian scientist, a member of the Board of International Korczak Association, President of Janusz Korczak Society in Russia, a member of British Educational Research Association, of International Study Association on Teachers and Teaching, of International Congress on School Effectiveness and Innovation. She is the Head of the Pedagogy Department, Institute of Psychology and education, Kazan (Volga region) federal university, Kremlevskaya 18, Kazan, 420021, Russia.

Ilshat R. Gafurov is a doctor of economics, professor, Rector of Kazan (Volga region federal university). Rector Ilshat Gafurov performs a large amount of work related to the implementation of two strategic programmes – Programme for development (since 2010) and Programme for competitive growth (since

2013) in the framework of the project on the entry of five Russian universities in the first hundred of the world's research and education centres. It has forced to reconstruct educational, scientific, business priorities under the requirements of the market. Among these priorities of the modern university, the teaching education occupies the prominent place. Rector's interest in it is, first of all, caused by the understanding of the special significance of this direction as the most important social mission of KFU.

ORCID

Roza A. Valeeva  <http://orcid.org/0000-0002-8312-4054>

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