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## **The Problems of Contemporary Education**

### **Formation of research competence of future teachers based on digital technologies**

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#### **Abstract**

The most important goal of the higher pedagogical university is to train not just well-educated and highly qualified specialists, but also the development of a humane and highly cultured personality of a teacher who is able to think creatively, independently achieve goals, and bear personal responsibility for the results and consequences of his activities in the upbringing and education of students. Knowledge is important for a future teacher, but the ways of obtaining and transmitting it are no less important. Therefore, the university sets itself the task of equipping students with the skills to most effectively organize independent activities, develop cognitive interest and creative activity, teach them to study independently, and encourage a desire for self-education. The task of the student as a future teacher is the ability to organize the independent activity of the student, teach him to independently acquire knowledge, form his own point of view, be able to argue it and apply the knowledge gained in practice. For this, it is necessary that the teacher has research competence, which, as we showed in the first chapter, can be realized in independent design and research activities. In accordance with the research hypothesis, we developed a program for experimental verification of its leading ideas. The main idea of the experiment was to identify the conditions for the formation of research competence of students in the process of teaching them at the university. The reliability of the results of the study is ensured by a comprehensive analysis of the legal, scientific, methodological and psychological-pedagogical literature on the topic of the study and the methodological validity of the theoretical provisions; the use of methods adequate to the object, purpose, objectives and logic of the study based on empirical data;

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the validity of the applied diagnostic methods; confirmation of the results of experimental verification and the implementation of the results in the practice of training teaching staff.

**Keywords:** formation, research, competence, future, teachers, based on digital technologies

### **1. Introduction**

The general goal of the ongoing educational reforms in the country is to bring the education system to the world level and adapt it to the new socio – economic situation. The main feature of any people is their historical memory, language, literature, art and culture, which determines their own destiny. Language, history and literature are the main trinity of national consciousness. Therefore, it is important to develop important projects that determine the strategic position of developing national consciousness and responsibility. He is a member of the newly formed Kazakhstan Association it should determine the potential and humanistic orientation (Apple, 2001).

The most relevant areas of humanitarian knowledge – language and literature-are the main tools in the formation of continuity of the past history and present fate of the nation, the establishment of Interstate cultural relations, the education of young people in humanism and patriotism. In the modern scientific paradigm, language is not only a means of communication, but also a means of preserving the cultural heritage of a particular people, an indicator of national knowledge and consciousness, and a socio-political force that unites and cooperates people. And literature is the National Spiritual memory, the driving force of human development and historical and artistic narrative. The integral function of language and literature should be recognized in the context of various scientific developments on topical topics. For this purpose, Educational, Scientific it is necessary to achieve the quality of secondary and higher education with the introduction of new modern technologies based on the latest achievements of Science and technology and integration of production (Tattoo, 2007).

Restoration of the won cultural values of the Kazakh people, a number of works are being carried out in the country under the state program "cultural heritage", designed for all-round promotion in order to study, promote it to the next generation, as well as make it a common spiritual property of mankind. Despite the fact that the priority areas for the development of education and science in kazarga are innovative-industrial, technology and technology, it is important to pay due attention to the development of the humanitarian sphere, the education of young people in spiritual and cultural values and the introduction of traditional culture and modern interethnic, multicultural, tolerant relations. Only when they complement each other and are closely integrated can they serve the future of the nation without fail. After all, the example of where the one-sided rule of technocracy leads to is not small in world practice.

The modern process of social development sets the task of educating an educated person who is able to effectively plan his activities, intelligently use the acquired knowledge in cognitive activity, enter into an effective dialogue of communication with people of various groups to achieve the final result. The key to the future can be opened only by students who have received a high-quality education, have high recognition, competence, and are able to withstand strong rivalry.

The individualization of the country in the global world takes place through an educated, energetic, spiritually rich young generation with a national consciousness.

In a society dominated by knowledge and information, the education system is the main part of the innovation economy. The innovative economy, whose strict requirements are being formed, requires not only the competence of a modern specialist, that is, the formation of ideas about his field, professionalism, a tendency to changing living conditions, the use of relevant knowledge, but also their replenishment as needed (Banks, 2008).

The highest value that ensures the socio-cultural process in society is education. The main condition for improving this high value quality is the development of professional competencies of teachers. Thus, taking into account the main priorities of building a knowledge-based society, higher professional competence is required from pedagogical specialists.

The idea of the competence approach answers the question: "what knowledge is needed by society, what individuals are needed and what needs of society it can satisfy." The formation of the competencies of a future specialist is one of the urgent problems of the modern field of education. Competence-based approach, improving the quality of education can be considered as one of the ways out of the crisis caused by the contradiction between the traditional approach and solving the problem of increasing the content of education. This approach gives the main place to the results of education. Its quality is important not so much from the abundance of knowledge gained, but from the ability to apply this knowledge.

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In this regard, the terms "competence", "competence", "professional competence" have become widely used in the education system of developed countries and are included in the education system of our country as a key direction followed by a new educational standard. Our goal is to identify the essence of the competencies of future specialists in relation to their category of activity in the context of globalization by studying studies conducted at the level of foreign language competencies (Lanham, 2006).

## **2. Materials and methods**

### **Procedure Sample and Participant Selection**

At this stage of the experiment, it became necessary to master the methodology of scientific research by all participants. The task of the author of this study was the problem of captivating students with independent design and research activities, achieving a clear understanding of the essence of the work, methods of its implementation and presentation of the results. The principles of the competency-based approach became the basis of the experiment, allowing to implement interdisciplinary, systemic, integrative-modular, personality-oriented and personality-activity approaches in the formation of research competence. Based on the concept of developing the research competence of students developed by us, we organized an independent design and research activity built on a modular basis in the process of studying at the university. Initial theoretical positions of project-based learning: - the principle of humanization (the focus is on the student, the development of his creative abilities); the educational process is built not in the logic of the subject, but in the logic of activities that have personal meaning for the student, which increases his motivation to study; - the individual pace of work on the project ensures that each student reaches a new level of development; - an integrated approach to the development of research projects contributes to the formation of research competence; - deep, conscious assimilation of basic knowledge is ensured through their universal use in different situations. Thus, the essence of project-based learning is that the student, in the process of working on a project, comprehends real processes, objects (Giroux, 2003).

It involves the student living in specific situations; introducing it to the penetration into the depths of phenomena, processes, the design of new objects, processes. During the experiment, we used modular training as an approach to organizing project and research activities, which ensures individualized assimilation by students of the necessary educational material. This article offers the author's vision of digital competencies that teachers and historians will be able to master. Digital competencies include information literacy in the digital environment, communication and collaboration, digital content creation, digital security, the ability to identify a simple technical problem and seek help to solve it.

It should be noted that in the process of research activity, the formation and development of personal properties and qualities of the researcher takes place: as cognition, independence, the ability to creatively solve practical problems in personal professional activity, efficiency. Thus, the research activity of students at a pedagogical university of any level (bachelor's degree, master's degree) is considered by us as an important component in the system of teacher training, which should provide for the possession of skills, research search skills and readiness for research activities, and the quality of this activity can be analyzed through the developing research competence of the future teacher in the learning process.

The development of research activities in the training of teachers makes it possible to justify the need and study of professional competence using a system-activity approach. In particular, the educational and research competence of university students acts as one of the conditions for academic success and the development of professional competencies. It manifests itself in various elements as a skill, the ability of personal self-realization, in the form of a mechanism of self-development. Research competence is a product of learning due to self-development, personal growth, holistic synthesis of one's activity and personal experience. These authors use the concept of "research competence" as a characteristic reflecting the willingness and ability of the subject to apply theoretical knowledge and practical experience in solving communicative and research and other tasks in teaching.

Thus, in the modern development of psychological and pedagogical science, research competence is considered as the most important component of professional competence. It is formed when studying basic and profile disciplines, analyzing and solving research problems, performing coursework and qualification work by a future teacher. This actualizes the interest in the procedural side of research competence, which is formed in the process of implementing educational activities, while the position occupied by students in this activity is important. It follows from these studies that the development of research competence is one of the important conditions for the successful professional activity of a

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future teacher.

The study of the professional training of students at the university in historical specialties shows the need to master a whole complex of various scientific knowledge, including those related to the features of the object of its activity of the holistic pedagogical process in which the personality of the future history teacher is formed. Based on the fact that the formation and development of research competence while studying at a university is a complex multi-level step-by-step dynamic process, it is necessary to consider its various aspects in interrelation at all levels of teacher training. Thus, research competence is considered as an integral characteristic of personal and professionally significant qualities of a teacher, assuming possession of a system of scientific knowledge and value orientations specific to this branch of science (Bates, 2008).

### **Assessments and Measures**

The active teaching methods used in higher education institutions include: brainstorming, solving problems by algorithm, discussing specific situations. Also widely used are such forms that put students in an active position: a problem lecture, a consultation lecture, a press conference lecture, a conversation lecture, a discussion lecture, a research lecture, a lecture using feedback elements.

"Brainstorming" is a method of activating students' thinking abilities by jointly searching for solutions to complex problems (proposed by American psychologist A. Osborne). "Brainstorming" in the educational process takes place between groups of 5-6 students, united at the request of the students, without anyone's coercion. There will be no criticism, self-criticism, the most unexpected, even an unrealistic idea, is perceived and passes a group examination. The rating line selects a complex and relevant topic in the content of the discipline.

It is known that the method of "brainstorming", originally used in the advertising business, was dictated by the goal of encouraging a person to think creatively.

The main tasks of this method are:

- accumulate as many ideas as possible;
- solving problems related to science or education;
- development of the student's creative thinking;
- development of cooperation.

Brainstorming is an attempt by the members of the group, actively working on a certain topic, to express their ideas expressed about it, to express their opinions and to state what is based on general agreement. This action must be performed on the driver's side in proportion to the clearly set time.

Brainstorming rules:

1. Do not criticize, evaluate, discuss or defend ideas during a brainstorming session. The task of brainstorming is to enable the birth of new ideas that have been implemented within a certain limited period of time. Evaluation, Discussion and selection of ideas is part of the task of its next stage.
2. The members of the group should discard all ideas, solutions, examples that come to their mind, whether any. Every idea should be fully voiced. At the next stage, it will be easier to sift through those that have been voiced and choose the most reasonable ones from them than to come up with new ideas.
3. At this stage, attention is paid to more ideas than to their quality. The more ideas there are, the more confident it is that it is easier to find the right ones. If you work individually, then capture all the ideas in your head on paper.
4. From all that has been said, now highlight new ideas. They also need creative inspiration to comment and make adjustments. Any member of the group has the right to improve ideas, suggest other options. Therefore, it would not be superfluous to review your existing ideas again, perhaps they will create the prerequisites for the birth of another new idea.

The key and the rule for achieving high results is the formation of friendly relations arising from the activity of participants.

Stages of "brainstorming":

- definition of the goal (what are you interested in: ideas of a public speech or a solution to a specific problem or topic? ...);
  - appeal of participants to the expression of their ideas (work with the public in case each participant should alternately offer one idea, and in group work -several ideas from each group);
  - write down every idea on the board;
  - using the ideas of others in order to improve;
  - follow the clear and correct construction of ideas so that they do not repeat each other;
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- classify and generalize ideas.

At the end of the brainstorming session, an individual or groups consider the result of the process in order to draw general conclusions from the thoughts expressed. Small groups jointly solve the problem, and then put forward the same thoughts for discussion in front of the general group (different representatives from each group speak). All the work is carried out very quickly and in an organized manner. This method not only teaches the culture of communication, but also increases the creative potential of students, eliminates adolescence and monotony in thinking.

### **Procedures**

The first stage (2020) identified the problem of research, defined its goals and objectives, prepared the scientific apparatus of research. In the course of the analysis of domestic and foreign fundamental scientific research, the theoretical and methodological foundations of the problem under consideration are revealed. Materials on the topic were sorted and summarized. Scientific articles have been prepared and published in publications. Experimental sites have been identified, an experimental work plan has been prepared, and an elective course curriculum has been prepared.

The second stage (2021) continued the systematization of theoretical material, during the ascertaining experiment, the first levels of knowledge of future specialists were tested through tests, questionnaires, the results were summarized, a formative experiment was conducted. The work on the elective course for students (seminar, training) has been tested and put into practice.

The third stage (2022) of the formation experiment was continued, the results were sorted, processed, systematized by structure, recommendations were developed and formalized in accordance with the requirements.

### **3. Results**

As a result of the examination of standard curricula in the disciplines "history" and "history of Kazakhstan", the following main positions were identified: the main substantive feature of the new program is the presence of "transitional" topics in the implementation of interdisciplinary connections between disciplines within one educational area and between different educational areas. Now, when studying the subject "history of Kazakhstan", students develop that the history of the nation is an integral part of the history of the world and the world historical process. Transition topics allow us to study certain processes and phenomena at the global and national levels in combination. Pedagogical approaches. In the new structure of the curriculum, modern pedagogical approaches are reflected as the classic basis of education, among which are such approaches as value-oriented, action, personality-oriented, communicative. They are used to strengthen the system of educational goals and the priority of the results of the educational process. The expected results established in the curriculum are presented in the form of a system of educational goals. A distinctive feature of training programs is their focus on the formation of a wide range of subject knowledge, skills and abilities. At the same time, the content of academic disciplines is tied to educational goals and is aimed at the formation of students' personal qualities. Topics in long-term plans are set in the form of problematic questions. This allows the teacher to activate the thinking activity of students. This approach to the compilation of topics creates conditions for the development of critical thinking skills in students, the ability to ask problematic questions and independently analyze. The essence of this program is the formation of functional literacy of students, the ability to transfer the knowledge gained within the walls of the school to the necessary ones in life. Therefore, the basis of this program is built on the concept of "communication with life". In the XXI century, a great responsibility has been assigned to instilling in students the skills necessary to be successful in all spheres of life. Within the framework of the updated curriculum, only educated teachers who love their subject, their profession endlessly, who consider the life of a teacher to be powerful for a child, can work.

The process of passing in the system of modern Kazakh education, leads to the formation of new ideologies and methods of education as ideologies and methods of innovative education. Innovative technologies of training are considered as tools, with the help of which a new educational paradigm can be imagined in life. "It is included in the list of "" innovative education "" innovative education will help self-education of teachers and teachers." He creates conditions for the full development of all participants in the educational process. The main tool of innovative education is productive pedagogical methods of technology. Specific special schools for children with specific educational needs are subject to significant information about pedagogical technologies, forms and methods of work, material handling, forms of control and assessment. "History of Kazakhstan" in correctional schools for children with increased intelligence is a predicate, in the process of studying which students use historical material, there is a need for knowledge and hope. In addition, the most important task of

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the proposal is to improve the quality of materials for students, the formation of personal qualities of citizens, the preparation of a child for life, social and legal adaptation of a child in the public. In a special school for children with special educational needs (knowledge of intelligence), historical knowledge is used in various forms of Organization of the educational process, but the main form of education remains Urok. Many years of practice of training in a correctional school has allowed us to improve various pedagogical technologies and introduce elementary technologies that are highly productive in the training of children with intellectual disabilities. At the same time, the health saving and developing aspect, psychological comfort and the creation of a situation for all educational purposes have been strengthened in the development system of the history of Kazakhstan. In practice, the history of Kazakhstan is used in the regions of Project Technology, Information Computer Technology, Technology developing training and other technologies. The structure of the lesson in the correctional school corresponds to the requirements for lesson to the expanded education. The first stage includes a lot of personal, psychological and post-traumatic problems. Attraction to the lesson every day is carried out on a wide scale. The psychological level determines the level and internal motivation of students, the pace and plot of the lesson, from which the hope of the lesson, the success of the lesson and the students, and the teacher. The main part of the lesson (middle) includes the main work on the study, implementation and control of knowledge. At the same time, active forms of training, various technologies and methods of work are used. At the same time, the lesson is used to prepare for the development of entry, memorization and Mousetrap. One of the most productive forms is individual work on the cards with the table, which has been entered into historical terms on the specified basis. They should be trained and trained. This is due to a minute of time. In one variant, every book will stand in one cell, in one stroke the tables can be one or another word. In another variant, the words and symbols between them were written in a splashy text. After reading all the terms, all or specific terms are related to students. This form of work develops the penetration and speed of mousetrap. It also allows you to organize an increase or decrease in the study of new topics. A large role in the study of history is played by information and computer technologies.

#### **4. Discussion**

Now in the educational space there is a huge amount of digital materials on all topics of the curriculum – these are materials of the Central Research Center, fragments of documentaries and feature films, audio materials. These materials allow you to replace the verbal explanation of new material by watching and listening to video and audio materials. It is necessary to prepare a task for each viewing of such material, it may be a problematic issue, a table or texts with omissions. Students not only get acquainted with new material, but also perform the task individually, in pairs or in small groups. Sometimes in the classroom there is a synthesis of two technologies - information and computer technology and project technology. Mini-projects are created during the lessons during the study and consolidation of new material. Students work in pairs or in small groups. Students present all mini-projects in the classroom to the class. Since children with intellectual disabilities need to develop communication competencies, teaching dialogue is one of the components of history lessons. The simplest example of dialogic learning is a frontal survey. Students of correctional schools often answer questions in monosyllables, sometimes when a teacher helps a student to build a sentence correctly, he does not repeat the sentence after the teacher, but nods affirmatively or pronounces only the last words in the sentence. Therefore, it is necessary to tell the student "continue the sentence", "compose the sentence correctly", "answer the question with a full sentence" or "repeat the sentence after me". Most often, this technique has to be used in the seventh grade, at the beginning of studying the subject, but with some students this technique is used throughout all years of study. There are several other techniques that teach dialogue and develop speech. At the stage of knowledge control or consolidation of the studied material, students are given individual cards, according to which they verbally answer, using as a template for the correct answer. For example, students are given a task to continue 5-6 sentences, the student reads the beginning of the sentence and ends it with his own words, a short story on the topic under study is obtained. Another example: students fill out a table and talk about it. More often, of course, reference schemes are drawn up in the lessons, which reflect the dates, personalities, places of battles, names of the event. According to this scheme, a student with an intellectual disability can reproduce the studied material, since he clearly sees the clues. It is very difficult for a student of a correctional school to retell the educational material, so we break the entire text into semantic parts and retell it in parts based on diagrams, tables, drawings, etc. To teach dialogue, students are invited to ask questions from the proposed list to a partner and check the correctness of the answer according

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to the template, correct the answer if necessary. Then, in a pair, the students switch roles. This is how students learn to speak in expanded sentences, memorize speech turns and begin to apply them in speech. At each lesson, new words are introduced to expand the vocabulary and explain their meaning. The teacher's questions are constructed in such a way that the student is forced to use new words in the answer. The most difficult thing in a correctional school is working in groups. Students have a hard time perceiving the answers of other students, do not always understand each other, as they cannot accurately express their thoughts, do not know how to argue, submit new ideas. Another feature is that they cannot assign roles in groups, and even if they are assigned, they cannot always perform their functions according to their role. Group work with students with intellectual disabilities is more appropriate to use in project activities. Mini projects can be created at each lesson, when studying any topic, but it requires a lot of preparatory work. For example, when studying the uprising, each group is given the same set of illustrations, a contour map, portraits of the leaders of the uprising, fragments of text, dates, place names, etc. The set may include extra dates, portraits of historical figures of another era, texts describing a completely different historical event. After the teacher's story or watching video materials, subsequent acquaintance with the material of the textbook paragraph, students in the group, using this set of material, atlases and the text of the textbook, create their own mini-project. The territory of the uprising is plotted on the contour map and the places of battles are marked, a portrait of the leader of the uprising, dates, names of the main battles, and supporting fragments of texts are glued. Mini-projects turn out to be colorful, not always neat, but any student can retell the material according to them. Evaluation criteria are discussed in advance. Most often, this is the correspondence of the material to the topic (exclude materials that do not correspond to the topic), accuracy of execution, presentation of the project and protection – the story of historical material on its topic. The protection of the project and the project itself is evaluated by other groups, the teacher directs students to mutual evaluation, reminds them that it is necessary to speak correctly, not offend each other, emphasize the merits of the work and listen to the opinion of classmates. At such a lesson, new material is repeated many times in different forms – this is watching a video, a teacher's story, familiarization with the material from the textbook, working on a project (selecting the appropriate material, the correct localization location on the contour map), protecting the project – listening to the response of other students. Involuntary memorization occurs (connection of involuntary memory) and then the student easily reproduces the studied material in the next lesson. The listed forms and methods of work do not reflect the full methodological piggy bank that has been accumulated over the years of work in a correctional school. But the practice of teaching and the analysis of the results of various studies that have been conducted over the years have shown that the chosen forms and methods of work give a good result in teaching children with intellectual disabilities.

## **5. Conclusion**

Summing up the results of our research, we conclude that finding a positive solution to the problem is a necessary and mandatory prerequisite for the formation of Kazakhstan as a competitive country in the foreseeable future.

In the course of the conducted research on such an important issue, the following results were obtained.

1. It is proved that future teachers need to accumulate theoretical knowledge, reasoning that globalization is the upcoming stage of general political, economic, and other world development, the highest stage of industrial development, a set of changes associated with the unification of nations, states, technologies, the market, the transformation of a heterogeneous world into a single whole and is aimed at solving global problems as something fundamentally new.
  2. The paper substantiates that globalization is a great demand of time in the transformation of societies and cultures, including the impact on education. Because the role of human capital is great in order to get a good education and be competitive with other countries. As you know, the reforms in the field of education in Kazakhstan are dictated by the need for the country to enter the world educational space. The study analyzes the nature of globalization and the relationship between globalization and education.
  3. It is proved that this process in education is a pedagogical process aimed at educating a person working on a global and local scale, the future younger generation, based on mutual understanding on universal, democratic, humanistic values
  4. Competencies of future specialists in the context of globalization: knowledge, ability to navigate global issues related to the subject, intercultural communication (ability to prepare students for life in
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a multicultural environment); 3) information skills (pedagogical skills that teach students to analyze world information, various points of view); 4) the ability to local and global responsibility (young people have their own, family ability to form responsibility to the environment, society as a whole), in the educational space of the changing world, the definition of the integrated complex quality of teacher training necessary for his activities and experience, the implementation of universal ways of cognition is given and justified.

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## **7. Conflict of interest**

The authors report no conflict of interest.

## **8. References**

- Apple, M. W. (2001). Markets, standards, teaching, and teacher education. *Journal of Teacher Education*, 52(3), 182-196.
- Ball, A. F. (2009). Toward a theory of generative change in culturally and linguistically complex classrooms. *American Educational Research Journal*, 46(1), 45-72.
- Banks, J. A. (2008). Diversity, group identity, and citizenship education in a global age. *Educational Researcher*, 37(3), 129-139.
- Bates, R. (2008). Teacher education in a global context: Towards a defensible theory of teacher education. *Journal of Education for Teaching*, 34(4), 277-293.
- Burbules, N. C., & Torres, C. A. (Eds.). (2000). *Globalization and education: Critical perspectives*. New York: Routledge.
- Cuban, L. (1993). *How teachers taught: Constancy and change in American classrooms, 1890-1990* (2nd ed.). New York: Teachers College Press.
- Darling-Hammond, L., & Cobb, V. L. (1996). The changing context of teacher education. In F. B. Murray (Ed.), *The teacher educator's handbook: Building a knowledge base for the preparation of teachers* (pp. 14-60). San Francisco, CA: Jossey-Bass.
- Delandshere, G., & Petrosky, A. (2004). Political rationales and ideological stances of the standards-based reform of teacher education in the US. *Teaching and Teacher Education*, 20, 1-15.
- Freire, P. (1970). *Pedagogy of the oppressed*. New York: Herder & Herder.
- García, E., Arias, M. B., Murri, N.J.H., & Serna, C. (2010). Developing responsive teachers: A challenge for a demographic reality. *Journal of Teacher Education*, 61(1-2), 132-142.
- Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. New York: Teachers College Press.
- Giroux, H. A. (2001). Teachers, public life, and curriculum reform. *Peabody Journal of Education*, 69(3), 35-47.
- Giroux, H. A., & McLaren, P. (1986). Teacher education and the politics of engagement: The case for democratic schooling. *Harvard Educational Review*, 53(3), 213-238.
- Hiebert, J. (1999). Relationships between research and the NCTM standards. *Journal for Research in Mathematics Education*, 30(1), 3-19.
- Kumashiro, K. K. (2010). Seeing the bigger picture: Troubling movements to end teacher education. *Journal of Teacher Education*, 61(1-2), 56-65.
- Ladson-Billings, G. (1994). *The dreamkeepers: Successful teachers of African American children*. San Francisco, CA: Jossey-Bass.
- Ladson-Billings, G. (1999). Preparing teachers for diversity: Historical perspectives, current trends, and future directions. In L. Darling-Hammond & G. Sykes (Eds.), *Handbook of policy and practice* (pp. 86-124). San Francisco, CA: Jossey Bass.
- Longview Foundation. (2008). *Teacher preparation for the global age: The imperative for change*.
- Silver Spring, MD: Author. Loomis, S., Rodriguez, J., & Tillman, R. (2008). Developing into similarity: Global teacher education in the twenty-first century. *European Journal of Teacher Education*, 31(3), 233-245.
- McLaren, P., & Farahmandpur, R. (2001). Teaching against globalization and the new imperialism: Toward a revolutionary pedagogy. *Journal of Teacher Education*, 52(2), 136-150.
- Merryfield, M. (1997). A framework for teacher education in global perspectives. In M.
-



Merryfield, E. Jarchow, & S. Pickert (Eds.), *Preparing teachers to teach global perspectives* (pp. 1-24). Thousand Oaks, CA: Corwin Press. Downloaded from [jte.sagepub.com](http://jte.sagepub.com) by guest on August 1, 2016  
120 *Journal of Teacher Education* 62(2) National Board for Professional Teaching Standards. (2002). *What teachers should know and be able to do*. Arlington, VA: Author. National Council for Accreditation of Teacher Education. (2002). *Professional standards for the accreditation of schools, colleges, and departments of education*.

Stromquist, N. P., & Monkman, K. (2000). *Globalization and education: Integration and contestation across cultures*.

Lanham, MD: Rowman & Littlefield. Tatto, M. T. (2006). *Education reform and the global regulation of teachers' education, development, and work: A cross-cultural analysis*. *International Journal of Educational Research*, 45(4-5), 231-241.

Tatto, M. T. (Ed.). (2007). *Reforming teaching globally*. Oxford, UK: Symposium Books.

Tatto, M. T., Schwille, J., Senk, S., Ingvarson, L., Peck, R., & Rowley, G. (2008). *Teacher Education and Development Study in Mathematics (TEDS-M): Policy, practice, and readiness to teach primary and secondary mathematics. Conceptual framework*. East Lansing: Teacher Education and Development International Study Center, College of Education, Michigan State University.

Torres, C. A. (2002). Globalization, education, and citizenship: Solidarity versus markets? *American Educational Research Journal*, 39(2), 363-378.

Zhao, Y. (2010). Preparing globally competent teachers: A new imperative for teacher education. *Journal of Teacher Education*, 61(5), 422-431.

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