

**PSYCHOLOGICAL AND PEDAGOGICAL TRAINING OF FUTURE  
TEACHERS OF SECONDARY SCHOOLS IN THE UNIVERSITIES OF  
GERMANY**

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**Abstract**

The purpose of the study is to identify key principles for structuring the content of psychological and pedagogical training of future teachers based on the analysis of the legal framework for professional training of teachers of secondary schools in Germany, and based on program-methodical and educational-methodical documentation of German universities as well. The author has found that the training of future secondary school teachers in German universities includes four blocks: 1) special-subject; 2) subject-didactic; 3) "Science of Education"; 4) professional and pedagogical practice. The author emphasizes the special significance of the block "Science of Education", because it reflects the content of psychological and pedagogical training of teachers. In the article it was revealed that the purpose of this block is to consider the main problems of teaching, education, and assessment of students, and the introduction of innovations based on the synthesis of knowledge in pedagogy, psychology, sociology. The basic fundamental task of the block "Science of Education" is to develop special reflective competence of future teachers.

Teacher training standards for the block "Science of Education" are formulated in terms of competencies, which every future teacher should possess for the effective implementation of professional and pedagogical activities. There is a further development of the curriculum of psychological and pedagogical training of teachers on the basis of these standards. The central points of these standards are education and upbringing; profession and role of teacher; action strategies in decision-making situations; designing the learning process and learning environment; diagnostics, assessment, counseling; differentiation, integration, support; motivation for success and learning motivation; learning, development, socialization; communication, interaction and conflict management; media education; school development; research in the field of education. The author reveals two key areas of structuring the content of curricula in the block "Science of Education". The first one is based on the subject principle - through the definition of the list of disciplines and on the principle of interdisciplinarity. It provides conducting classes based on the synthesis of knowledge in pedagogical, psychological, and sociological sciences. It is proved that the interdisciplinary principle is determinative in the process of updating the content of psychological and pedagogical training of teachers in Germany.

**Keywords:** psychological and pedagogical training, sciences about education, principle of interdisciplinarity, subject principle, future teachers, general secondary education institution, university, Federal Republic of Germany.

### Introduction

The beginning of the XXI century was marked not only by rapid social and economic, and political changes in society. Besides, it could be characterized by rethinking of the role of teachers in the development of globalization and integration processes. It is stated in the international legal acts (such as documents of UNESCO, the Organization for Economic Cooperation and Development (OECD), the Council of Europe and others) that the teaching staff potential is the basis for ensuring high quality and competitiveness of education in the world labor market. Also the teacher of the XXI century is proclaimed the bearer of social change.

Nowadays the training of teachers is really important. They are the main driving force for the renewal of the national education system in accordance with modern requirements. All the mentioned was emphasized in key Ukrainian documents, such as: Law of Ukraine "On Education" (2017), National Strategy for the Development of Education in Ukraine until 2021 (2013), the Concept of implementation of state policy in the field of reforming general secondary education "New Ukrainian School" until 2029 (2016), regulations The Cabinet of Ministers of Ukraine "On additional measures to improve the skills of teachers in 2018" (2018), Concept of development of pedagogical education (2018), branch Concept of development of continuous pedagogical education (2013). In particular, among the strategic directions of education development, the necessity to modernize the structure and content and organization of education on

the basis of the competence approach was declared. This transfers accents from the process of accumulation of normatively defined knowledge, skills and abilities to the field of formation and development of the ability to act practically and creatively apply the acquired knowledge and experience in different situations. In this conceptual scheme, the psychological and pedagogical training of the future teacher should be activity and personality oriented. It is known that competencies are developed and manifested in the activity under the condition of deep personal interest and on the basis of comprehensive interdisciplinary knowledge, which should be focused on solving problems of practical pedagogical activity. All these highlight the necessity to update the content and to find effective forms and methods of psychological and pedagogical training of future teachers in higher education.

Taking into account all the mentioned, we can assume that experience of psychological and pedagogical training of teachers of general secondary education in the Federal Republic of Germany (Germany) opens new opportunities to improve pedagogical education in Ukraine in terms of its adaptation to the requirements of the European educational space. There is such an interest to the system of higher pedagogical education in Germany due to a number of reasons, including the fact that this country has a rich historical tradition of education. Due to it, Germany received an opportunity to play a leading role in the field of world science and education. It is one of the most developed and open countries in Europe. Germany is one of the initiators and an active

participant in the process of creating a European Higher Education Area and it has a significant experience in the field of professional training in the new socio-cultural environment.

**The aim of the article** is revealing key principles of structuring the content of

### **Theoretical background**

During the years of independence of our state, the interest of comparative scientists in studying the education system in Germany has only increased. Many famous scientists have studied various aspects of the German model of teacher training, among them are: L. Puhovska, B. Melnichenko, N. Mahinja, S. Bobrakov, T. Vakulenko and others. But it is necessary to mention that the analysis of the domestic scientific literature has showed that the psychological and pedagogical training of secondary school teachers in Germany was not the subject of a systematic scientific search in Ukraine. It still has been insufficiently studied. The scientific achievements of German scientists on certain aspects of the training of future teachers of general secondary education are really important for our study. In particular, such scholars as: E. Terhart (Terhart, 2000), J. Schützenmeister (Schützenmeister, 2002) analyzed the state and problems of professional pedagogical training of secondary school teachers in Germany at the beginning of the XXI century in their works; K. Bauer (Bauer, 2005), J. Baumert (Baumert, 2011), W. Nieke (Nieke, 2006) substantiated the structure of professional competence of teachers; A. Mack (A. Mack), D. Rohr (Rohr, 2012) described the forms and methods of psychological

psychological and pedagogical training of future teachers on the basis of the analysis of the normative-legal base of providing professional training of teachers of secondary schools of Germany and program-methodical documentation of German universities.

and pedagogical training of future teachers of secondary schools in Germany.

The mentioned German scientists in their research have actualized the following problems of teacher training as: insufficient professional orientation; lack of links between science and practice; insufficient attention to the study of methods of teaching the subject; lack of interaction between the phases of university training, internships and further professional development of teachers; insufficient attention to the personal growth of the specialist-teacher. They especially emphasize the necessity to update the content of psychological and pedagogical training of teachers as a basis for the development of professional competence of the future specialist.

### **Methodology**

The following methods were used in order to achieve the goal of the study as: general scientific (analysis, synthesis, generalization). The normative-legal base of providing professional training of teachers of secondary schools of Germany and program-methodical documentation of German universities was worked out with the help of these methods. The structural and functional analysis was also used. Besides, approaches to structuring the content of psychological and pedagogical training of teachers in universities of Germany were identified.

### Results

An analysis of the legal framework for the professional training of teachers in secondary schools in Germany has revealed that the main guidelines for the training of specialists in higher education institutions were reflected in the Framework Law "On Higher Education" of January 19, 1999. It is a guideline for the development of the corresponding legislation at the regional level (Hochschulramengesetz, 1999).

At the same time, the details of obtaining professional pedagogical education are defined in the land laws "On teacher training". The structure of these land laws reflects the main phases of professional pedagogical education. It also reveals the organizational and

The basis for the formation of the content of psychological and pedagogical training of secondary school teachers are the standards of teacher training in the block "Science of Education". They are approved by the Conference of Ministers of Education and Culture of the Federal Länder of Germany on December 16, 2004.

Standards are defined through the competencies that a future teacher should master for the effective implementation of daily professional pedagogical activities in such four areas as: training, education, evaluation and innovation. The improvement of acquired competencies in the process of further education becomes particularly important, as the development of competencies is a dynamic and continuous process (Standards für die Lehrerbildung, 2004). The standards formulate the general purpose of education, the objectives of teaching groups of subjects and guidelines

pedagogical aspects of university training, school practice, internships, further postgraduate education and advanced training of teachers. In particular, in the mentioned laws it is stated that the training of future secondary school teachers in German universities includes the following blocks as: 1) special-subject (two or three subjects of teaching); 2) subject-didactic (by subjects of teaching); 3) "Science of Education"; 4) professional and pedagogical practice. The new practical components of university education at the beginning of the XXI century were: orientation practice, professional field practice (for bachelors), practical semester (for masters) (Lehrerausbildungsgesetz, 2009; Lehrkräftebildungsgesetz, 2014).

for planning and designing the curriculum by regional and local authorities, universities. It is emphasized that the block "Science of Education" is interdisciplinary and it covers a number of scientific disciplines (pedagogy, psychology, sociology). These disciplines explain the processes of education and upbringing, they reveal the basics of the functioning of educational systems, their internal and external relationships (Standards für die Lehrerbildung, 2004: 2).

Standards are a framework structure for further curriculum development and formation of the content of psychological and pedagogical training modules. The curriculum is a framework for the content of education in the system of higher and postgraduate education. (National Academy of Pedagogical Sciences of Ukraine, 2017: 25). Curriculum as a document differs from the educational program, due to the fact that educational

program determines primarily the substantive side of the course and is only a part of the curriculum. In addition to the program, the curriculum contains an analysis of the reasons for the need to introduce new educational content; clear definition of learning objectives; outlining the target groups for which this curriculum is designed; a description of the expected relationship between the teacher and students; consistency of methodological principles with corresponding educational materials; modern models and teaching aids; system and principles of control and evaluation (White Book of the National Education, 2009: 50).

The main points of the curriculum for the training of teachers in secondary schools in Germany in the block "Science of Education" are as follows: education and upbringing; profession and role of teacher; action strategies in decision-making situations; designing the learning process and learning environment; learning, development, socialization; motivation for success and learning motivation; differentiation, integration, support; diagnostics, assessment, counseling; communication, interaction and conflict management; media education and media literacy; school development; research in the field of education. The standards emphasize the special importance of training secondary school teachers of all types to interact in heterogeneous groups - implementation of individual support in the system of school education of children with physical and mental disabilities, gifted children, migrants to ensure equal opportunities and the right to education based on the

principles of humanization and individualization (Standards für die Lehrerbildung, 2004: 5).

The standards do not have a clear list of disciplines for students to study. Instead, the main topics were identified and they have defined a teacher's professional activity in four areas - training, education, evaluation, innovation. Therefore the competencies of the future teacher in the theoretical and practical aspects of university training are determined according to these spheres. Further development of competencies is provided during internships and postgraduate education.

In particular, the third paragraph of the standards describes 11 competencies of future teachers, namely:

1. teachers professionally and scientifically plan and conduct lessons;
2. teachers support students' learning motivation by involving them in learning situations that provide an opportunity to use the acquired knowledge and experience;
3. teachers facilitate the development of students' abilities for independent learning and work;
4. teachers take into account in the educational process the social and cultural living conditions of students, they support student's individual development;
5. teachers support the formation of students' life values and norms of behavior, they encourage independent decision-making and development of an action plan;
6. teachers find the best ways to solve problem situations and get out of conflicts during and outside the lesson;
7. teachers diagnose the conditions of learning and the learning process, consult students and parents;

8. teachers objectively assess students' learning achievements on the basis of understandable criteria;

9. teachers know and understand the requirements for the teaching profession, understand their work as a public position with special responsibilities and obligations;

10. teachers carry out continuous professional self-development and self-improvement;

11. teachers are involved in the planning and implementation of school projects for school development (Standards für die Lehrerbildung, 2004: 7–14).

The standards contain recommendations for the effective development of competencies. It is emphasized that the training of future teachers should be interdisciplinary, practical and research-oriented with the obligatory development of professional reflection. The guidelines for the practical implementation of the development of professional competencies of future teachers in the standards we can define as the following:

- concretization of theoretical concepts with the help of verbally described examples of professional pedagogical activity, examples from literature sources, videos, role-playing and business games, modeling situations;

- an analysis and methodological interpretation of simulated, filmed or directly observed learning situations;

- conducting video monitoring;
- approbation of theoretical concepts by students during practice with the subsequent reflection of experience of pedagogical activity in written tasks, role games;

- an analysis and reflection by students of their own previous learning experience based on theoretical concepts;

- use of media resources in the educational process of the university and during internships at school;

- participation of students in different research projects;

- cooperation of university teachers, consultants of the center of school practical training and school teachers for the purpose of planning, carrying out and the analysis of common actions;

- coordination of the activities of people involved in the support of future teachers during internships at school (Standards für die Lehrerbildung, 2004: 6).

Special common commissions were created in some German Länder to study the standards of the Science of Education and to create a curriculum for the training of secondary school teachers in certain federal states of Germany. For example, with the assistance of the Rhineland-Palatinate government, the "Teacher Training Curriculum Standards" were established in May 2011. They became a guideline for the development of curricula and corresponding modules by universities (Curriculare Standards des Fachs Bildungswissenschaften, 2011).

We want to clarify that the curriculum describes only the general goals, content of training and competencies that the future teacher should acquire. It determines the scope of professional and methodological competencies in accordance with the training program (bachelor / master) and identifies the main topics for the formation of integrated knowledge and skills in the process of professional and methodological training of future teachers.

In particular, in the curriculum standards we have proposed to take as a

basis the variant of load distribution, which we have shown in Table 1.

**Table 1. Workload distribution by the "Science of Education" block in the universities of the federal state of Rhineland-Palatinate (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 6]**

Type of teacher training	Total number of success scores (SS)	Distribution of SS according to training programs	
		Bachelor's degree	Master's degree
Primary school teacher	34 SS	34 SS	--
Main school teacher	50 SS	30 SS	20 SS
Real school teacher	40 SS	30 SS	10 SS
Gymnasium teacher	42 SS	30 SS	12 SS
Teacher of vocational school	42 SS	May vary	
Teacher of a special school	34 SS	34 SS	--

The content of the modules has its differences according to the type of school in which the future teacher will continue his activities, which we can see in table 2. In particular, the curriculum standards emphasize that the training of primary and

special school teachers has its own specific features. Therefore the content of modules for these types of teacher training may differ significantly (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 6).

**Table 2. Content of modules on the "Science of Education" block in universities Rhineland-Palatinate (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 7)**

Training program	Module	Type of teacher training
Bachelor's degree	1. Socialization, upbringing, education	all teachers
	2. Didactics, methods, communication and media	all teachers
	3. Diagnosis, differentiation, integration	teachers of the main, real, gymnasium, vocational school
	4. Upbringing and education in childhood	primary school
	5. Psychological bases of special pedagogical support	special school teachers

Master's degree	6. School development and differential didactics	teachers of the main, real school, gymnasium
	7. Professional pedagogy	vocational school teachers
	8. Special tasks of education and pedagogical support	primary and secondary school teachers

We focused our attention on the content of the modules, which are the same for future teachers of secondary schools of the first and second grades, namely: main, real and gymnasium. It means that we pay attention to the content of modules 1) "Socialization, upbringing, education"; 2) "Didactics, methods, communication and media"; 3) "Diagnosis, differentiation, integration"; 6) "School development and differential didactics".

The content of module 1) "Socialization, upbringing, education" includes the following topics: 1) learning, development and socialization of children and youth in school and out of school: cognitive, emotional, social and speech development, learning and motivation; 2) education and upbringing in institutional processes: history and theory of childhood and youth, theory of emotional and value development, compliance of development and education with age norms, school as an environment of learning and development of students; 3) organization of the educational process on the basis of Evangelical or Catholic pedagogy, which is a subject of choice for students (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 7).

According to the module 1, students have to master the following competencies: they should know theories of personality development and take them

into account in the appropriate context of socialization of children and youth; understand the key aspects of different theories of teaching and education, they should be able to use them as categories of analysis of the educational process; they should understand the importance of interaction between teacher and student for the social development of the child's personality; they should understand the education and upbringing of children and youth as key tasks of the school, they should be able to scientifically substantiate their importance in the context of society development; they should be able to reflect on their own previous experience of teaching and education (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 7).

The content of the module 2) "Didactics, methods, communication and media" involves the acquisition of competencies on the following topics: 1) creation of the educational environment at school and during the lesson: conceptual substantiation of the content of lessons, methods of teaching the subject, preparation and design of learning and learning situations, theory of didactics 2) communication and interaction as the basis of teaching and education: theories of communication and interaction, coding and decoding of messages, verbal and nonverbal communication, activation and support of attention, constructive conflict

management and violence prevention; 3) independent and creative use of the media, taking into account technical, practical, aesthetic and educational aspects, the concept of media education, communication and the media (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 8).

After completion of the topics of the module 2, students should master the following competencies: they know the main components of the lesson, they should be able to analyze the lesson and its theoretical and methodological aspects; they should know the basic stages of lesson planning, they should be able to apply didactic knowledge and skills during independent lesson planning; they should know the strategies of interviewing students during the lesson and the criteria for assessing academic performance; they should be able to reflect about their own previous experience of teaching and education; they should have basic knowledge to explain the processes of interaction and communication during the lesson and at school; they should be able to perceive the content of verbal and nonverbal communication, interpret their own communication messages; they should be able to analyze conflict situations, identify ways to constructively overcome conflicts and know ways to prevent conflicts during the lesson; they should understand the importance of cooperation of students in the team and the interaction of teachers with students; and be able to apply information and communication technologies in accordance with the objectives of the lesson, they should analyze the experience of using the media,

assess the psychological and educational effects of the media product; they should know the rules of communication with the use of media resources and follow them (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 8).

The module 3) "Diagnosis, differentiation, integration" contains the following list of topics for students: 1) diagnosis and support of individual features of learning processes: individual support and differentiation of tasks, monitoring and measurement of productivity; 2) heterogeneity, individual, social and cultural diversity of the student body: giftedness, developmental disabilities, social and cultural features as conditions of teaching and education, the task of pedagogical correction of individual development of students, accessibility and inclusiveness of education; 3) tasks and functions of counseling, its concepts and procedures, survey methods (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 9).

The aim of mastering the module 3 is the formation and development of the following competencies as: knowing the basics of diagnostics of learning processes, opportunities and limitations of methods for measuring learning productivity; perceiving the student group as a heterogeneous group; knowing the methods and ways of individual support of students; understanding the impact of social and cultural living conditions on the development of the personality of children and youth; be able to interact with students in a socially determined diversity, taking into account intercultural differences in the educational process; be

able to identify developmental disorders and special abilities of students, supporting the development of these abilities on the basis of the relevant pedagogical concept; knowing the tasks and functions of counseling students and parents; be able to design and interpret counseling situations based on communication theories; be able to apply methods of interviewing students and parents, know the possibilities and limitations of their use (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 9).

The module 6) "School development and differential didactics" includes the following topics: 1) special requirements to the pedagogical activity of teachers in schools of different types and features of the educational process; 2) school development, school-based research; 3) teaching methods; design, implementation and evaluation of teaching and learning situations; teacher communication with students during the lesson (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 12).

The competencies that students should acquire upon completion of this module are as follows: they should know and understand the requirements of the teaching profession, specific educational tasks of the teacher; they should know the special requirements for pedagogical activities of teachers in schools of different types and features of the educational process, they should be able to compare them; understand the goals of training and education, they should be able to reflect on their own experience of pedagogical activities, taking into account them; they should be able to use research

methods at school; and be able to scientifically make a choice of methods of teaching and education, they should evaluate the effectiveness of their use during lessons and extracurricular activities; and be able to analyze and interpret the process of communication with students, they should apply methods and techniques of conversation with students and parents; and be able to apply information and communication technologies and use the media in the educational process, they should assess their psychological and educational impact (Curriculare Standards des Fachs Bildungswissenschaften, 2011: 12).

At the universities of the federal state of North Rhine-Westphalia, the curriculum of teacher training in the block "Science of Education" prescribes for students to study the content of five modules: for students receiving bachelor's degree – the module 1) "Education", the module 2) "Assessment", the module 3) "Training"; for students receiving master's degree – the module 4 "Innovation", and the module 5) "Diagnosis and individual support".

The following topics are defined in the characteristics of the content of the module "Education": theories of teaching, education, socialization; modern achievements of pedagogical, psychological and sociological basic and applied research; scientific substantiation of the basics of professional pedagogical activity; development of communication and interaction skills; the impact of social and cultural living conditions on the education and socialization of the individual; discrimination in education

and ways to overcome it; conflict situations in the educational process; behavioral strategies and ways to overcome conflicts constructively; reflection on one's own experience of teaching and education (Universität zu Köln, Humanwissenschaftliche Fakultät, 2015: 8).

The content of the module "Assessment" identifies the following topics for study: cognitive, social and motivational bases of competence development; diagnostic methods: the procedure of applying it and possible restrictions; assessment of student achievement: criteria, standardized diagnostic procedures, informal tests, exams; feedback as a necessary condition for monitoring performance and determining learning outcomes (Universität zu Köln, Humanwissenschaftliche Fakultät, 2015: 10–11).

The content of the module "Learning" involves mastering the following topics: basic guidelines for designing and constructing of teaching and learning processes (educational standards and curriculum requirements, organization of school and classroom activities, lesson as a dynamic interaction in conditions of heterogeneity and diversity); models for ensuring the quality of teaching and learning and its theoretical and empirical foundations; requirements of professional pedagogical activity (social organization of learning processes and classroom leadership, structuring and conducting lessons, with their further analysis and evaluation); didactic models of teaching, their scientific substantiation; use of media resources in the school environment; learning theories, learning

strategies, methods of individual and cooperative learning (Universität zu Köln, Humanwissenschaftliche Fakultät, 2015: 12).

The module "Innovation" includes the following list of topics: features of activity as: schools and lessons; theories and models for defining educational innovation processes and measuring their effectiveness; methods of empirical research in the field of education and design of their results; professional requirements for teachers; the main directions of school development and educational process; educational standards and school programs (Universität zu Köln, Humanwissenschaftliche Fakultät, 2015: 9).

The module "Diagnosis and individual support" is aimed at developing competencies while working on the following topics: theories and methods of diagnosis; procedure and tools for diagnosing abilities, features of development and behavior; development of recommendations in accordance with the results of diagnosis; optimization of teaching and learning processes taking into account the obtained data; determination of efficiency and expediency of ways of correction of development of the person (Universität zu Köln, Humanwissenschaftliche Fakultät, 2015: 11).

Thus, in the pedagogical education of Germany there is a recession from the established practice of structuring the content on the basis of the subject principle, which provides for the correspondence of the structure of the content of education to the structure of branches of scientific knowledge. Due to

the competence approach, the content of education begins to be considered not by specifying the number of subjects (so-called "input control"), but through the definition of results ("output control"), which are planned to be obtained at the national level (Lokshyna, 2009: 19).

It is necessary to mention, that a significant number of universities in Germany have left the subject principle of content structuring of psychological and pedagogical training of teachers. Although in higher education institutions in some Länder, including Bavaria and Baden-Württemberg, development of modules is carried out by allocating separate educational disciplines, among which are: general pedagogy, high school pedagogy, psychology, sociology, philosophy, religion (evangelical or catholic) and folklore/European ethnology (Otto-Friedrich-Universität, Bamberger Zentrum für Lehrerbildung, 2015: 172–195).

Therefore, it is natural that in a number of publications, some outstanding German scientists as H.Kiper, (Oldenburg, Lower Saxony), R. Arnold (Kaiserslautern, North Rhine-Westphalia), V. Ladenthin (Bonn, North Rhine-Westphalia) define two parts of content of the block "Science of Education" as: 1) subject principle, which involves the acquisition of knowledge in a particular discipline - pedagogy (high school pedagogy, general didactics); psychology (pedagogical, social psychology, learning psychology, work psychology, psychodiagnostics);

sociology (theory of socialization, organization, basics of scientific research); political science (basics of educational policy, etc.), 2) interdisciplinary principle, which requires creation of an interdisciplinary course based on the synthesis of the most important for professional pedagogical activities knowledge of various sciences (Arnold, 2009; Kiper, 2009; Ladenthin, 2009).

In order to demonstrate the subject principle, we present the content of the modules of the block "Science of Education" of teacher training at the Otto-Friedrich-Universität Bamberg and the Universität Augsburg (Bavaria). The components of this block are shown in the Table 3.

The purpose of the module "General Pedagogy" is to define the basic concepts, including "teaching" and "education", to acquaint students with the basic requirements of the teaching profession, disclosure of the content of his work at school. The content of this module provides students with the following topics: the history of pedagogy, the formation of pedagogy as a science, methodology of science, essence, content, general laws and principles of education, components of the process of education, styles of education, learning as a pedagogical category, its goals, requirements, significance, planning and organization of the learning process (Otto-Friedrich-Universität, Bamberger Zentrum für Lehrerbildung, 2015: 174).

**Table 3. Disciplines of the block "Science of Education" of the curriculum Otto Friedrich University of Bamberg ((Otto-Friedrich-Universität, Bamberger Zentrum für Lehrerbildung, 2015: 172–173)**

Module	Status	S
General pedagogy	obligatory	8
High school pedagogy	obligatory	12
Psychology	basic, obligatory	5
	additional, obligatory	10
Philosophy	by choice	3 or 5
Politology	by choice	5
Sociology	by choice	5
Religious Studies (Evangelism)	by choice	3 or 5
Religious Studies (Catholicism)	by choice	3 or 5
Folklore / European ethnology	by choice	3 or 5

The module "High School Pedagogy" includes the following topics as: organizational systems of school education, tasks and functions of the school, introduction of innovations, planning, conducting and analyzing lessons, individualization and differentiation, educational management, approaches to school development, methods of evaluating the success of school development, the basics of research in school, health technologies, concepts and models of inclusive education (Otto-Friedrich-Universität, Bamberger Zentrum für Lehrerbildung, 2015: 188–189).

The following thematic components were singled out in the content of the module "Psychology": pedagogical psychology of teaching and learning (basic processes of learning and

assimilation of knowledge, basic models of learning); differential psychology and personality psychology (learning motivation and motivation to succeed); social psychology of school and family (expectations, values, beliefs, school class as a group, class management); developmental psychology in the context of childhood and adolescence (models and conditions of development); psychological and pedagogical diagnostics (psychological bases of estimation and interpretation of data, value of measurement of school achievements and development; detection of behavioral disorders in children and adolescents) (Otto-Friedrich-Universität, Bamberger Zentrum für Lehrerbildung, 2015: 178–181).

### Discussion

In the article we have noted that the standards of teacher training for the block "Science of Education" are the basis for the formation of the content of psychological and pedagogical training of teachers of secondary schools in Germany. At the same time, these standards become a framework structure for further development of the curriculum and the formation of the content of modules of psychological and pedagogical training. We found that their creation and implementation in Germany have caused a wave of discussion among German scientists, such as K. Beck (Beck, 2006), M. Brandenburg (Brandenburg, 2002), J. Oelkers (Oelkers, 2003), E. Therhart (Therhart, 2005) and others.

Also the processes of standardization of pedagogical education in different countries of the world, including Germany, have become the subject of research by Ukrainian comparativists. Professor L. Pukhovska in the article "Standards of pedagogical education: a scientific discussion of Western scholars" notes that the development of world and European educational space, harmonization of national education systems, including pedagogical, in the conditions of development of the market of educational services, actualize the problems of equivalence of qualifications, training courses, diplomas, certificates, etc. And this, in turn, gives rise to rapid processes of standardization of pedagogical education (Pukhovska, 2013: 10). The Ukrainian researcher draws attention to the fact that the existence of standards does not really guarantee the quality of pedagogical education. This is so because the peculiarity of their interpretation and implementation is related to the human factor. She agrees

with scientists who see professional teacher standards as a tool for implementing education strategies in a rapidly changing world (Pukhovska, 2013: 17).

Another Ukrainian comparative researcher, Professor O. Lokshina, emphasizes that in the Western Europe people try to leave the established practice of structuring content on the basis of the subject principle, which provides for the correspondence of the structure of the content of education to the structure of branches of scientific knowledge. According to the competency approach, the content of education is not determined by specifying the number of subjects (the so-called "input control"), and through the definition of results ("output control"), which are planned to be obtained at the national level (Lokshyna, 2009: 19). This approach is reflected in the German standards of teacher training in the block "Science of Education".

We agree with the scientists' opinion about the positive importance of implementing standards in order to improve the quality of training of secondary school teachers. At the same time, we believe that they should be theoretically reasonable; they should reflect the scientific basis of professional pedagogical activity and be in structural unity, in order to be an effective basis for the formation of the content of psychological and pedagogical training of future teachers.

We should mention that our study does not cover all aspects of this problem. Therefore we consider further study of the content, forms and methods of organization of psychological and pedagogical training of secondary school teachers in German universities as promising areas of scientific research.

Also, identification of constructive ideas of the German experience of pedagogical education and development of scientific and methodical recommendations on their use in the system of higher pedagogical education of Ukraine can be sphered by the interest as well.

### Conclusions

In the article we found that the training of secondary school teachers in German universities is carried out on an interdisciplinary basis in the following blocks: special-subject, subject-didactic, science of education, and practice at school. German scientists emphasize the special importance of the block "Science of Education". The content of psychological and pedagogical training of teachers is presented in this block. It is a block of interdisciplinary complex, which involves the use of scientific knowledge from different disciplines (pedagogy, psychology, sociology) in order to reveal the basics and features of the processes of education, training and upbringing, and conditions for the effective functioning of the education system, the interaction of participants in the educational process, etc. Its main function is to ensure pedagogical professionalization and promote the formation of pedagogical identity. The fundamental task of the block "Science of Education" is to develop reflexive competence. And the reflective competence means not only the ability to internalize theoretical and methodological knowledge, but also the desire to constantly develop them and test

them in practice in appropriate situations with corresponding interaction partners.

We can make a conclusion, on the basis of the analysis of the normative-legal base of providing professional training of teachers of secondary schools of Germany and program-methodical documentation of German universities, that the formation of the content of psychological and pedagogical training of future teachers of secondary schools in the universities of Germany is carried out in two directions. These directions are the following: the first one is the subject principle. It is applied through the definition of the list of disciplines. Another principle is a principle of interdisciplinarity with a focus on results. The focus is on the development of competencies based on the synthesis of knowledge from various fields of science and practice, mainly pedagogy, psychology, sociology. We should note that the principle of interdisciplinarity is decisive in the process of updating the content of psychological and pedagogical training of teachers in Germany. Accordingly, the topics of the modules are complex. Their aim is to consider certain phenomena and processes of school, extracurricular life in terms of different sciences in their inseparable unity. Modules require mastering of certain competencies. The main competencies are theoretical knowledge of pedagogical, psychological, sociological sciences and the development of the ability to project this knowledge in the field of professional activity in school and beyond.

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