

The Content and the Componential Structure of the Projective Competence

¹D.I. Mukhatayeva, ¹A.A. Bulatbayeva, ¹G.A. Kassen, ²A.B. Aitbayeva and ¹M.E. Seilkhanova
¹Al-Farabi Kazakh National University, Almaty, The Republic of Kazakhstan
²Abai Kazakh National Pedagogical University, Almaty, The Republic of Kazakhstan

Abstract: The projective activity is one of the main activities of the graduates along with scientific-research and organizational-administrative ones. Therefore, the formation of the projective competence of the students is a topical problem in the system of university education. The study analyzes the content, the componential structure and the nomenclature of the skills and abilities of the projective competence necessary for the students. The analysis of the various scientific and pedagogical sources shows that the the problem of the projective competence formation in the future specialists is not developed sufficiently. Researchers demonstrate the results of the questioning which formed the basis of four components of the projective competence: administrative, emotionally personal, creative and intellectual. The respondents were the graduates and undergraduates of the “pedagogics and psychology”, “social pedagogics and self-cognition specialties. The total number was 52 persons. The substantial analysis of the questionnaires allowed to group each component of the projective competence with the help of skills and abilities selected by students. The interesting answers were the answers which demanded the selection of the strong and weak points in the formation of the projective competence on the basement of self-assessment. At the same time, any of the “strong” points did not collect even a third of the respondentst which testified the necessity of the formation of the projective competence since, it would not be developed spontaneously on the basis of the increasing of the quantitative or age characteristics of the students. The results of the questioning showed a peculiar awareness of the graduates and undergraduates about comprehension of the content of the projective competence and its importance for the future professional activity. At the same time, there is an extreme necessity of the social and pedagogical support for the formation of the main components of the projective competence within the frame of the university education. The forms of the support have to be harmoniously included into educational and extracurricular activities of the students.

Key words: Competence-based paradigm, competence-based model of education, projective activity, projective competence, demand of the specialists, administrative skills, efficiency, social and pedagogical support, the process of the formation of the projective competence

INTRODUCTION

The modernization of the Kazakhstani institutes of higher education demands the training of the high-qualified specialists who are ready for their professional activity and able to solve the complex problems to raise a question and find new creative solutions. The demand for specialists who can perform the projects is confirmed by inquiries of the employers binding this type of activity with such qualities and abilities as initiative independent thinking, creativity and business efficiency.

The foreign researchers in the collection of the articles of the “21st century skills for students and teachers”, emphasize that the decision-making, the joint use of information, the cooperation, the innovation and the tempo are very important characteristics for today’s

enterprises. Today, the successfulness demonstrates the ability to report, divide and use information for solving complex problems; an ability to adapt and introduce the innovations in response to the new demands and changes of the society; an ability to command and dilate the potential of the technologies in creation of new knowledge. That is why, the following groups of competences can be suggested: the skills of critical teaching and innovative skills (it includes communication and cooperation, critical thinking and the problem solutions, creativity and innovation); life and professional skills (it includes leadership and responsibility, productivity and the system of reporting, social and cross-cultural skills) (PPRC, 2010).

The designers of the competence-based model of education by competence understand a certain integrated ability to solve the specific problems arising in various

spheres of the life. According to Verbitsky (2010), the competence is the competency which was realized in practice. The main intension of this approach is to strengthen the practical orientation of education to be beyond the frames of “knowledge, skills and habits” educational space. Therefore, the projective activity is one of the main activities of the graduates along with scientific-research and organizational-administrative ones. The formation of the projective competence and its subsequent social and pedagogical support during the learning process is an actual problem in system of university education.

The concept of “the projective competence” in the context of a modern educational paradigm represents a quite difficult phenomenon. On the one hand, it is connected with the problem of understanding of this concept from the position of the scientific achievements on the other hand, it is connected with the identification of the psychological conditions of the competence development as the subjective characteristics of the person. Therefore, the analysis of the content of the projective competence for its subsequent formation, social and pedagogical support in terms of future specialists training deserve a special attention.

MATERIALS AND METHODS

The content of the projective competence: The analysis of the various scientific and pedagogical sources shows that the problem of the projective competence formation in the future specialists is not developed sufficiently. The theory and the practice of the professional training at the institutes of higher education do not present the consistent works revealing and concretizing the essence of the projective competence of the students, the works which would define the content, the structure, the pedagogical terms and technology of the projective competence formation in educational process.

From our point of view, the projective competence has to be defined by the readiness of the students for the projective activity by their individual abilities and motivated intention to learn independently to develop the culture of thinking and professional activity. The experience of the projective activity can be acquired in the process of the project fulfillment. The solution of the educational and cognitive tasks or situations, the development of the projective way of thinking, the analysis of the own projects and the participation in exhibitions, competitions contrie a lot to the acquisition of appropriate skills and habits.

The projective activity develops the research skills (the ability to analyze the problematic situation, to reveal

the problems, to select necessary information, to observe the situation, to fix and interpret the results, to build the hypotheses, to generalize and make the conclusions). It teaches how to work in a team (the students understand the importance of the teamwork for getting an effective results, the role of the cooperation and joint activity), how to communicate (Kormakova, 2011).

In order to formulate the definition of the projective competence, we will present the typology of the projects and specify the nomenclature of the skills necessary for the formation of the above mentioned competence:

- The dominating activities in the process of project fulfillment are research, creative, role, applied (practically focused) and introductory-oriented ones
- The subject content area includes the mono project (within a specific area of knowledge) and interdisciplinary project
- The nature of the coordination of the project is immediate (rigid, flexible), hidden (implicit, imitating the participant of the project)
- The nature of the contacts (among the participants of the specific institution, city, region, country or different countries of the world)
- The number of the participants of the project
- The duration of the project fulfillment

According to this typology, we also allocated those types of projects which are feasible in educational process within the frame of the dominating activity.

The research projects are the projects demanding the reasonable structure, the designated aims and the relevance of the object of the research for all participants, the social importance, the appropriate methods including experimental works and the methods of the result processing. They are completely subordinated to the logic of the research having approximate or completely coinciding with the authentic scientific research structure. This type of projects assumes the argumentation of relevance of the research theme, the formulation of the research problem, the subject and object, the tasks in a sequence of the accepted logic, the identification of the research methods, the information sources and the choice of the research methodology. It assumes the formulation of the hypotheses of the solution of the designated problem, the development of the ways of the problem solving including experimental ones, the discussion of the results, conclusions, the designing of the research results and the indication of further development of the research.

The creative projects assume the appropriate designing of the results such projects as a rule, do not have the detailed structure of the joint activity of the

participants. They are planned and developed on the basement of the genre of the result, the logic of joint activity accepted by group and the interests of the project participants. The participants of the project as a rule, discuss the planning results and the form of the project representation (the joint newspaper, the composition, the video movie, dramatization, sport game, a holiday and expedition). However, the designing of the project demands the reasonable structure in the form of the script of the video movie, dramatization and the program of a holiday, the plan of the composition, article, the reporting and the layout of the headings of the newspaper, almanac and album.

Role or game projects such projects outline the structure which can be modified during the process. The participants assume the certain roles of the character or the content of the project. It can be the literary characters or the invented heroes imitating the social or business relations stipulated by the situations which have been invented by the participants. The results of such projects are discussed at the beginning of the project fulfillment or appear only at the end. The degree of the creativity is very high the dominating type of activity is a role-game after all.

The introductory-orienting (informational) projects, the projects which are aimed at the collection of information about some object and phenomenon. The participants of the project should become familiar with collected information, its analysis and the generalization of the facts intended for the wide audience. Such projects as well as research ones, demand a reasonable structure, a possibility of a systematic correction during the work.

Practically focused (applied) projects deal with the social interest of the participants (the document made on the basis of the research results of the acquired disciplines, for example, the program of actions, the recommendations to avoid the disharmonies in a society, the draft law, the reference material and the dictionary). Such project demands the careful structure, even the scenario of all activities of the participants with the definition of their functions, clear conclusions, the designing of the project activity and the participation of everyone in designing of the final product. Here, the organization of the coordinated work of the stage-by-stage discussions, the correction of the joint and individual efforts during the presentation of the results, possible ways of their introduction into the practice and the systematic external assessment of the project are very important.

There are other types of the projects in educational university process with different subject-content sphere including mono projects (within the frame of one

discipline) interdisciplinary, literary and creative, natural scientific, ecological and linguistic and the culturological ones. It would be interesting and convenient to use personally oriented projects in educational process (between two partners, who are in different schools, regions and countries); dual (between pairs of the participants); group (between groups of the participants) projects. Indicating the temporary prospects of the projective activity, we recommend the short-term and the medium-term projects in the process of education.

The analysis of the research in the field of the systemically-activated, personally-focused and competence-based approaches in education and the typology of the educational projects allowed us to conclude that the projective competence of the student has to integrate the administrative (Heldman, 2007) emotionally personal and creative-intellectual components which would reflect its essence as the professionally-significant integrative quality of the person. This person would be characterized by the assimilation of the set competences connected with the development of the project, the assessment of the educational and cognitive tasks during the fulfilment of the project, with the selection of the means, methods and forms of the projective activity organization according to specific features and a trajectory of training.

The features of the projective method characterize the projective competence as well. Therefore, the projective activity can be considered as the reaction of the students to the real world problems from the position of the long-term perspective as the complex activity which can be individual or group demanding the final practical result (Cook and Weaving, 2013). There is another definition of the projective teaching, it is a method of teaching by means of which the students obtain knowledge and skills, working for a long period of time to investigate the complicated issues. At the same time, the following features of the projective teaching are distinguished:

- The significant content the project is focused on assimilation of knowledge and skills which are the standard and key notions of the academic disciplines
- The competences of the 21st century the students acquire the competences valuable for the modern world such as the solution of problems, the critical thinking, the collaboration, the communication and the creativity/innovations
- The profound inquiry the students are engaged in expanded and strictly controlled process with clear tasks, using resources and the development of the answers

- The open question the project work is focused on the open question which is understandable and intriguing for students
- It is necessary to know the students feel the necessity to obtain knowledge, they understand the concepts and apply their skills to solve the problem and create the product of the project, starting with “input event” which generates the interest and curiosity
- The voices and the choices the students have a chance to make a choice of the products, the mode of their work, the amount of the time and the teacher’s guidance depending on their age and experience
- The critical analysis and revision the project includes the information about reactions to the quality of their work and necessary modifications of the project process
- The public audience the students present their works to other people, out of the auditorium and group

RESULTS AND DISCUSSION

The results of the questioning on identification of the components necessary for the formation of the students’ projective competence: In order to identify the necessary skills and abilities of four components we questioned the graduates (2nd, 3rd and 4th year students) 33 people and undergraduates (1st and 2nd year students) of the “pedagogics and psychology”, “social pedagogics and self-cognition specialties”. The total number was 52 persons.

The questionnaire had 12 questions which required to mark out the qualities and the skills necessary for the

development of the different projects and the abilities necessary for the formation of the projective competence. The questionnaire required to define the main qualities of the person for successful development and implementation of the project. The questionnaire contained a peculiar scale of the lie the counterfactual questions (the 9th and 11th questions) for the reverification of the answers to other questions. Based on substantial processing of the questionnaires, we grouped the complexes of the marked-out skills and correlated them with four above mentioned components: administrative, emotionally personal, creative and intellectual (Fig. 1). The preliminary results are the following: the biggest part of the initial courses respondents (2ND year students particularly) note the importance of the qualities of mental activity (the intellectual component) and the creative abilities (the creative component). The 3rd year, the 4th year students and undergraduates in most of the cases note the importance to delegate the responsibilities, to cooperate and distrie the academic and cognitive activity, to correct the undesirable results of the project (the administrative component).

One of the questions required the selection of the strong and weak points in the formation of the projective competence on the basement of self-assessment. (Table 1). At the same time, any of the “strong” points did not collect even a third of the respondentst which testified the necessity of the formation of the projective competence since, it would not be developed spontaneously on the basis of the increasing of the quantitative or age characteristics of the students.

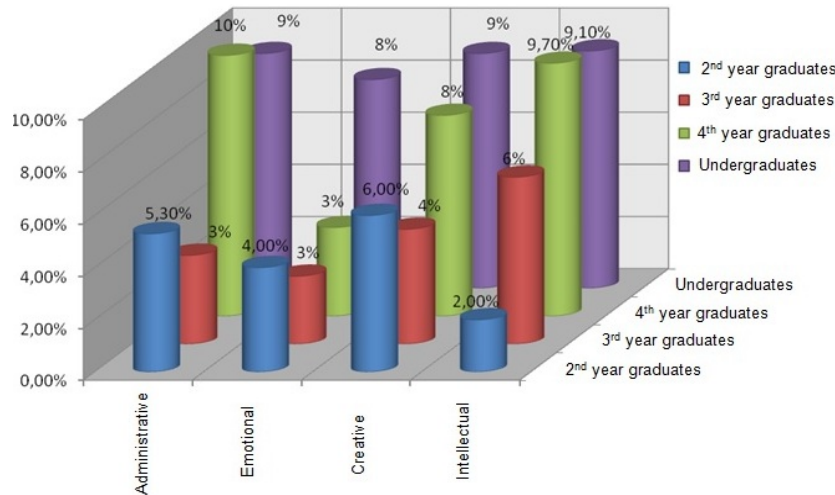


Fig. 1: The results of the correlation of the allocated complexes of skills and abilities with components of the projective competence, received on the basement of the questioning of the graduates and undergraduates of the “pedagogics and psychology” and “social pedagogics and “self-cognition” specialty

Table 1: The strong and weak points in the formation of the projective competence of the respondents

The strong and weak points in the formation of the projective competence	The portion of the respondents who have chosen the given variant (%)
The interest in positive results of the projective activity	30.8
The skill to identify the aims of the project and the ways of their achievements	67.3
The creativity, the feeling of the novelty, the sensitiveness to contradictions	28.8
The skill to organize the micro-groups in the process of the projective activity	40.4
The intuition	21.2
The skill to provide the current regulation of the projective activity	36.5
The criticism originality the independence of thinking	26.9
The skill to correct the undesirable results of the project	23.1
The competence of the self-assessment and mutual assessment of the intermediate results of the projects	17.3
The ability to convert the educational-cognitive task into personal one	69.2
The skill to use the intellectual resources and abilities	21.2
Emotional stability during the whole period of the project development	65.4
The literacy, the oratorical skill during the presentation of the project results	25.0
The skills of the public presentation of the results of the project	26.9
Reflexive skills	21.2
The ability to identify the new approaches of non-standard decisions	40.4
The ability to organize the active mutual activity	9.6
The inventiveness, the flexibility, the criticism, the divergent aspect, the originality, the independence of thinking	34.6
The skill to correlate the portions of the new and well-known aspects of the projects	36.5
The skill of the maximum use of the intellectual resources and abilities	44.2

Table 1 show that the weak links in the components of the projective competence are more evident than strong ones. There are skills and abilities identified by respondents as the strong and as the weak ones. So, the abilities of the maximum use of the intellectual resources as the strong points were selected by 21 and 2% of the respondents whereas the inability to use these resources was marked out by 44 and 2% of the respondents (twice as much). These results convince us to interfere into the process of the formation of the projective competence within the frame of the support or the management of the required process. We assume that the social and pedagogical support would be the optimal process of the interference into the process of the projective competence formation. We decided to include the questions for the determination of the skills and abilities demanding the support and which of them should be improved (i.e., what must be supported and what should be done?).

In order to identify the foreground support of the projective competence in terms of educational process of the university (i.e., the identification of the necessity to develop these or those skills or abilities) the questions 10, 12 contained the demand to select or to formulate independently those skills and abilities which are not developed or developed poorly and required the correction from the part of the teachers. In addition, it was necessary to select the educational and extracurricular forms of activity of the development of these qualities and skills.

Some answers of the graduates confirmed the necessity to obtain skills how to convert the educational-cognitive problem into personal one because the project, fulfilled by them in the process of academic disciplines acquisition is not an end in itself (answers: “we do not know why we should make a project”, “it is

not clear why the mini-project was done”). In addition, there were answers which identified the inability of the students to show the empathy, the democratic character and tactfulness in communication if “incompatible” students work with each other (answers: “it is bad when teachers do not take into account the personal characteristics of the students during the fulfillment of the projects”. “There would be less problems with project fulfilment if we had a chance to work with those who want and can work with me”).

The histogram shows that undergraduate students realize the necessity of the administrative component’s support (74%); the graduate students also understand the importance of the administrative component’s support in a less degree (52%). In addition, the students mark out the difficulties demanding the social and pedagogical support of the skills and abilities referred to the intellectual component (30%). They need the support in the development of the planning abilities (6.1%); the abilities to correlate new information with well-known aspects in the project (18.2%), the abilities to predict the expected results (3%), the abilities of the maximum use of the intellectual resources (2.7%) (Fig. 2).

Identifying the educational and extracurricular forms of activity in terms of active participation, these qualities and abilities can be developed. The graduates allocated the volunteer work, the participation in “LOGOS” in the scientific olympiads and competitions, connected with scientific-research. Undergraduates allocated various courses of qualification improvement, seminars and practicum of the famous psychologists. From their point of view, it is possible to obtain the administrative skills and abilities during the trainer’s work and coaching due to the acquisition of elective disciplines in the sphere business management. The results of the questioning

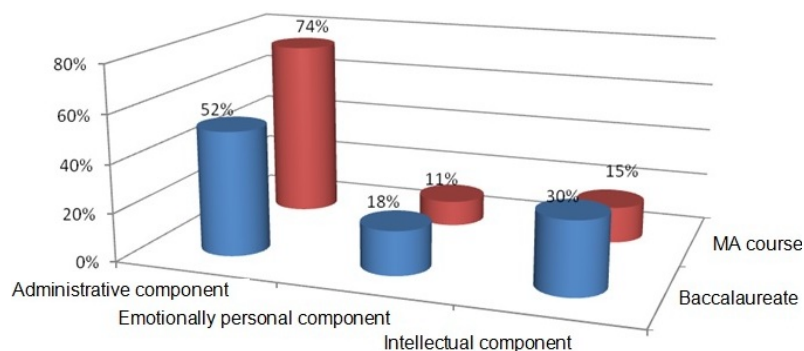


Fig. 2: The comparative histogram of the foreground support of the projective competence's components in terms of university educational process (according to the level of learning)

showed a peculiar awareness of the graduates and undergraduates in the field of comprehension of the content of the projective competence and its importance for their future professional activity. At the same time, we revealed the extreme necessity of social and pedagogical support of the formation of the main components of the projective competence in terms of university education and the forms of the support must be harmoniously included into the educational and extracurricular activities of the students.

The content of the components of the projective competence allocated during the questioning: The substantial analysis of the questionnaires allowed to group each component of the projective competence by means of selected skills and abilities. So, the administrative component is characterized by (Heldman, 2007):

- The ability of the student to define the real aims of the project, to choose the ways of achieving them with coordination of the planning and forecasting procedures
- The ability to organize the microgroups during the projective activity
- The ability to distribute and cooperate educational and cognitive work, to delegate the responsibilities and functions during the projective activity
- The ability to regulate the projective activity
- The ability to correct the undesirable results of the project to analyze and use the didactic materials in the context of the projective activity

From our point of view, the emotionally personal component has to include the following characteristics of the students:

- The desire to work in microgroups (during the fulfillment of the project) and show interest in a positive results of the projective activity

- The ability to convert the educational and cognitive task into personal one, the competence to establish the subject subject relations, the ability of the personally-oriented interaction during the projective activity
- The emotional stability during the whole process of the projective activity
- The ability to organize the joint activity, to assess the situation of the participants' interaction during the project fulfillment, to provide the success during the work
- The competence of self-assessment and mutual assessment of the intermediate results of the project
- The ability to show empathy, democratic character, tactfulness in the process of communication and the reflexive abilities
- The literacy oratorical skill, the skills of public presentation of the results of the project

The creative component of the projective competence has to include:

- The ability to solve the problems creatively in the process of the project fulfillment
- The creativity, the feeling of novelty, the sensitiveness to contradictions, the predilection for risk and the originality
- The intuition it is a possibility of the intuitive decision in ordinary situation, arising in consciousness in the form of a key of the decision (Frolov, 2015)
- The ability to solve the problem independently and efficiently on the basement of innovative technologies (Pintosevich, 2014)
- The ability of the identification of new approaches for non-standard decisions

The intellectual component has to include:

- The abilities to develop and realize the projects
- The qualities of the mental activity: inventiveness, flexibility, criticism originality independence of thinking
- The abilities of integration and planning of the project
- The abilities of correlation of new information with well-known aspects in the project, the ability to predict the expected results of all participants of the project
- The abilities of the maximum use of the intellectual resources

Now a days we have good tools for the assessment of the students' projective competence. There is a method of the assessment of the students' projective competence by Matyash and Volodina. The method of the assessment of human resources including projective and creative ones by Bastian (1993). The methods of the assessment of the development and formation of the projective competence in different spheres of future professional activity by Parfyonova (2015).

In spite of a wide range of investigations and practical manuals in this field, the structural components of the projective activity which are the substantial basis in educational process of the university representing the multisectoral educational institution are not presented sufficiently.

Relying on the experience of the above named scientists, we will develop the content and the model of the social and pedagogical support of the process of the formation of the projective competence in the system of university education.

This mini-research is dedicated to solve the whole complex of the problems connected with the analysis of the content of the projective competence. In our subsequent work, we will analyze the continuity of the professional training of the college and university students, the professional training of future specialists in the sphere of education on the basement of project technology. There are topical issues of the projecting and the development of new mechanisms of educational institutions' interaction with the social partners in terms of social and pedagogical support of the projective competence formation.

CONCLUSION

The graduates of the university have to possess the qualities of the personality, who is thinking creatively assimilating knowledge continuously and developing their successfulness in life. These qualities and abilities are substantially inserted into the main components of the projective competence. We prove it by means of the results of questioning, carried out by us among graduates

and undergraduates of two pedagogical university specialties. In spite of a small number of the respondents, the processing of the received answers testifies the importance of four components of the projective competence (administrative, emotionally personal, creative and intellectual) for future specialists. The substantial analysis of questionnaires allowed to group each component of the projective competence by means of the selected skills and abilities.

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REFERENCES

- Bastian, J., 1993. Freiarbeit and project-based teaching/a didactic of reunification. *Pedagogy*, 10: 6-9.
- Cook, R. and H. Weaving, 2013. Key competence development in school education in Europe: KeyCoNet's review of the literature: A summary. Research Report, European School Net, Brussels, June 2013.
- Frolov, V.N., 2015. Social and creative professional competence of the graduates of a humanitarian profile. *Proceedings of the II International Scientific Conference*, May 22-23, 2015, Kazan, pp: 203-210.
- Heldman, K., 2007. *Management of the Projects*. DMK Press, Moscow, Russia, Pages: 352.
- Kormakova, V.N., 2011. The formation of the projective competence in future experts of clothes design. *Secondary Professional Educ.*, 10: 18-21.
- PPRC., 2010. 21st century skills for students and teachers. Pacific Policy Research Center, Kamehameha Schools, Research and Evaluation Division, Honolulu.
- Parfyonova, T.A., 2015. The formation of the projective competence of future teachers in the conditions of professional education. *Educ. Health Care*, 1: 61-65.
- Pintosevich, I., 2014. *Be Effective! Efficiency from A to Z*. Eksmo Publishing Co., Moscow, Russia, Pages: 208.
- Verbitsky, A.A., 2010. Contextual and competence-based approach of education modernization. *Higher Educ. Russia*, 5: 32-37.