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The effectiveness of the project method in teaching humanitarian disciplines

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A eficácia do método de projeto no ensino de disciplinas humanitárias

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La eficacia del método del proyecto en la enseñanza de disciplinas humanitarias

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Resumo: Cutting-edge methodologies within higher education necessitate the cultivation of a proficient and competitive specialist capable of innovative thinking and can perform professionally amidst contemporary volatile circumstances. The purpose of this study was to identify the effectiveness of the project method as an innovative tool for the teaching of humanitarian subjects. The research used such methods as follows: questionnaire, observation, experiment, as well as statistical methods for data processing. In the course of the research, it was determined that the students who were engaged in the project activity, during the project, autonomously researched scientific, reference, educational, and methodological literature. A group of experts found that students' participation in project activities influenced the development of creative activity and creative systemic thinking, contributed to their self-organization. During the survey, it was determined that students' independent work on creating projects ensures the development of personal and functional components of self-organization.The research's scientific novelty lies in its exclusive focus on students studying humanitarian disciplines. The restricted scope of the experiment facilitated the identifying the project approach as such that can be integrated into the academic system to enhance students' personal and practical proficiencies, thereby promoting their overall growth. Further research can be aimed at determining the effectiveness of using game methods in the course of teaching of humanitarian disciplines.

Palavras-chave: *Cutting-Edge Technologies. Project Method. Humanitarian Disciplines. Personal Qualities. Self-Organization. Higher Education.*

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Abstract: *Metodologias de ponta no ensino superior exigem o cultivo de um especialista proficiente e competitivo, capaz de pensamento inovador e que possa atuar profissionalmente em meio às circunstâncias voláteis contemporâneas. O objetivo deste estudo foi identificar a eficácia do método de projetos como uma ferramenta inovadora para o ensino de disciplinas humanitárias. A pesquisa utilizou os seguintes métodos: questionário, observação, experimento, bem como métodos estatísticos para processamento de dados. No decorrer da pesquisa, foi determinado que os alunos que estavam engajados na atividade do projeto, durante o projeto, pesquisassem de forma autônoma literatura científica, de referência, educacional e metodológica. Um grupo de especialistas descobriu que a participação dos alunos nas atividades do projeto influenciou o desenvolvimento da atividade criativa e do pensamento sistêmico criativo, contribuindo para a sua auto-organização. Durante a pesquisa, constatou-se que o trabalho independente dos alunos na criação de projetos garante o desenvolvimento dos componentes pessoais e funcionais da auto-organização. A novidade científica da pesquisa está no foco exclusivo em alunos de disciplinas humanitárias. O âmbito restrito da experiência facilitou a identificação da abordagem do projecto como tal que pode ser integrada no sistema académico para melhorar as competências pessoais e práticas dos alunos, promovendo assim o seu crescimento global. Outras pesquisas podem ter como objetivo determinar a eficácia do uso de métodos de jogo no ensino de disciplinas humanitárias.*

Keywords: *Tecnologias de Ponta. Método de Projeto. Disciplinas Humanitárias. Qualidades Pessoais. Auto-Organização. Ensino Superior.*

Abstract: *Las metodologías de vanguardia dentro de la educación superior requieren el cultivo de un especialista competente y competitivo capaz de pensar de manera innovadora y que pueda desempeñarse profesionalmente en medio de circunstancias volátiles contemporáneas. El propósito de este estudio fue identificar la efectividad del método de proyectos como una herramienta innovadora para la enseñanza de temas humanitarios. En la investigación se utilizaron los siguientes métodos: cuestionario, observación, experimento, así como métodos estadísticos para el procesamiento de datos. En el transcurso de la investigación, se determinó que los estudiantes que participaron en la actividad del proyecto, durante el proyecto, investigaron de forma autónoma literatura científica, de referencia, educativa y metodológica. Un grupo de expertos descubrió que la participación de los estudiantes en las actividades del proyecto influyó en el desarrollo de la actividad creativa y el pensamiento sistémico creativo y contribuyó a su autoorganización. Durante la encuesta se determinó que el trabajo independiente de los estudiantes en la creación de proyectos asegura el desarrollo de los componentes personales y funcionales de la autoorganización. La novedad científica de la investigación radica en su enfoque exclusivo en estudiantes de disciplinas humanitarias. El alcance restringido del experimento facilitó la identificación del enfoque de proyecto como tal que puede integrarse en el sistema académico para mejorar las competencias personales y prácticas de los estudiantes, promoviendo así su crecimiento general. Se pueden realizar más investigaciones para determinar la eficacia del uso de métodos de juego en el curso de la enseñanza de disciplinas humanitarias.*

Keywords: *Tecnologías de Punta. Método de Proyectos. Disciplinas Humanitarias. Cualidades Personales. Autoorganización. Educación Superior.*

1 INTRODUCTION

Currently, educational process calls for essential changes in the organization of education (Anisimova, 2020; Lee *et al*., 2021), with further perspective of enhancing practical and applied aspects that can be achieved by transforming methods of professional training, as well as shifting the training focus onto the formation of educators' practical skills (Silva *et al.*, 2018). The incorporation of crisis situations into the educational process can be tailored to the training profile of prospective specialists, with varying methods and technologies. Moving forward, there will be a focus on enhancing search skills within the educational framework, granting students greater autonomy in acquiring necessary information and solving issues related to professional challenges (Gardiner, Musto, 2015; Soomro *et al*., 2018).

A substantial bulk of scholars address the problem of enhancing pupils' engagement in independent work concerning complex topics associated with specialized disciplines. In order to professionalize education within a tertiary institution, it was established that an efficacious technique is an application-based methodology that closely mirrors the vocational endeavours. Practice-based training involves the use of educational pedagogical scenarios, challenging professional tasks, and professionally-oriented technologies to cultivate practical expertise in future specialists

(Bernate, Vargas, 2020; Fernandes, Dinis-Carvalho, Ferreira-Oliveira, 2021). Regarding the practice-oriented activities utilized by prospective humanitarian specialists, their involvement in project creation aimed at independent student organization for future professional endeavours is crucial. Thus, it can be inferred that implementing project-based methodologies holds significant relevance within higher education. This is particularly due to the pivotal role played by independent resource utilization during the development of communicative and professional competencies among aspiring professionals, as they acquire new knowledge and skills for application in future career (Díaz-García *et al*., 2022; Tømte *et al*., 2019; Abad-Segura *et al.,* 2020). Therefore, the principal aim of the project method is to provide future specialists with the opportunity to independently acquire knowledge while solving practical tasks or situational problems that require the rapid integration of knowledge from diverse educational domains. As far as the teachers are concerned, while implementing the project method they assume the roles of both expert and coordinator to provide supplementary knowledge.

Given the above, the purpose of the research was to evaluate the efficacy of utilizing project-based learning in the study of humanities.in higher educational institutions. To achieve the set goal, the tasks were set as follows:

Determine the educators' degree of preparedness to facilitate instruction through project-based methodologies;

Develop the experimental part using the project method in accordance with the educational program;

To estimate the students' preparedness level for engaging in project-related tasks.

2 LITERATURE REVIEW

One of the hallmarks of societal progress is an elevation in educational standards. Moreover, one's drive to enhance their intellectual aptitude and competencies stems from possessing a crucial characteristic, namely the capacity for independent research and comprehension (Daminova, 2020). According to Abelha *et al*. (2020), since contemporary society imposes new benchmarks for skilled professionals, individual subjectivity gains ever greater significance. This owes itself to enhanced accountability as well as mounting demands for self-improvement, initiative-taking, personal growth and achievement. Consequently, it becomes imperative to explore how learning methods can be transformed so as to empower students with the skills needed to independently seek out pertinent information and successfully apply it within personal or professional contexts (Díaz-García *et al.,* 2022).

The instruction of humanitarian subjects is primarily geared towards cultivating a humanistic mindset that aligns with the learners' values and priorities. However, the traditional study of humanitarian disciplines has led to the isolation of teachers and students, namely limitations in learning and understanding the material due to an imperfections in pedagogical systems (Berry, Fagerjord, 2017; Ordaz González, Britt Mostue, 2018). As the conventional approach to education primarily focused on teachers reproducing content, it resulted in an inadequate development of critical thinking skills, motivation levels, and the capacity to effectively integrate concepts with practical application and collaborative group work among students (Fernandes, Dinis-Carvalho, Ferreira-Oliveira, 2021). Therefore, it was decided to apply and examine the project method during the study of humanities at higher educational institutions. In this sense, the study of humanitarian disciplines helps to form one's own worldview, moral and ethical value orientations, dialectical and analytical thinking, the ability to search and apply the acquired knowledge, the ability for self-organization and self-development. In numerous cases, they facilitate the broadening of one's perspective and cultivate an enhanced knowledge base, which serves as a prerequisite for establishing effective personal and professional discourse (Bryndin, 2019; Ivetić, Ilić, 2020).

Hence, it is imperative to implement pedagogical strategies that foster student motiva-

tion and interest, underscoring the significance of studying humanities in our society. In order to achieve this objective, educators must devise dynamic approaches that enable students to actively engage with humanities and cultivate their curiosity towards them (Malisuwan, Kaewphanuekrungsi, Milindavanij, 2014).

It should be mentioned that scholars emphasize the indispensability of utilizing active methodologies for teaching humanities thus facilitating effective acquisition of sophisticated terminology and encourage creative thinking through research-based activities as a practical component of learning (Muenster, 2022). Additionally, Dubrovina *et al*. (2021) underscore the importance of constructivist approaches in learning and teaching which encompass collaborative work while emphasizing on students' responsibility as active participants during their own learning process.

One of these active methods is project-based learning, which is an indispensable tool when teaching humanitarian disciplines, studying and accumulating complex expertise, as it encourages students to work in groups with a clear understanding of the goal.

Researchers place great emphasis on the implementation of the project method in educational settings, as it serves as an exceptional didactic model for attaining essential objectives: becoming a proficient educator and promoting substantial learning among students within academic programs (Edmond, Morselli, 2020; Leal Filho *et al*., 2022). Consequently, the project method represents a versatile instructional instrument applicable to both teachers and educators (Ferreira, Canedo, 2020).

The project-based approach facilitates the cultivation of a research-oriented and innovative learning environment in classrooms, thereby accommodating students with varying levels of knowledge, skills, and abilities while fostering their individual initiative. This method recognizes the unique characteristics of each student and augments their teamwork abilities as well as equips them with decision-making proficiency for professional situations. The teacher endeavors to diversify the preliminary stages of planning by integrating personalized tasks that enrich creative aptitude and individual initiative among students, thereby broadening their scope for active learning and professional growth..

In a recent study, Kobernyk *et al*. (2019) examined the efficacy of the project method in a teacher's workflow. The researchers did not validate the effectiveness of this approach as the final results obtained from the experimental group were only marginally higher than those achieved by the control group. This suggests that other pedagogical factors could be at play. Nevertheless, other scientists Ramos-Escudero *et al.* (2022) while studying the impact of the project method in the discipline of «Industrial Chemistry» determined that the implementation of the project method significantly affects the learning of the experimental group. Hence, it was decided to formulate two hypotheses as follows:

Implementation of the project method will not have a strong impact on the criteria: motivation, understanding of the material covered, interest in in-depth (independent) study of humanitarian disciplines (H0);

After implementing the project method, students' engagement in studying humanitarian disciplines will increase, the level of motivation and understanding of the material will enhance (H1).

3 METHODOLOGY

3.1 RESEARCH DESIGN

Table 1 – Stages of the research

Stages of the research	The time-frames of the stage
Stage 1: 1. Elaboration of a study program with the implementation of the project method and the plan of the experiment; 2. Formation of pedagogical conditions for the acquisition of professional competences by students through using the project method; 3. Determination of the initial formation level of students' professional competences.	September 2022– December 2022
Stage 2: 1. Implementation of the project method in the educational process; 2. Verification of pedagogical conditions for the effective functioning of the project method.	February 2023 – June 2023
Stage 3: 1. Determination of the project method effectiveness in achieving the set objectives; 2. Receiving and processing the results of the questionnaire; 3. Elaborating guidelines and a plan for further research.	June 2023 – August 2023

Source: Elaborated by the authors (2023).

3.2 FORMATION OF THE SAMPLE

The sample was formed from students of 2-3 years of study in the bachelor program and consisted of 160 students. That said, 4 groups were included in the experimental group (EG) - 76 students, and the other students were included in the control group (CG). The average age of the students was 17.5 years. The selection criteria were as follows: 89% of attendance at lectures and the completed adaptation stage. Therefore, it was decided to select students from 2-3 years of study.

Also, the sample included 8 teachers from the field of humanities, who at the time of the research were teaching the said students. According to a preliminary survey, it was established which of the teachers supported the idea of introducing the project method into the curriculum. They were designated as the experimental group. The teachers who were doubtful about the experiment conducted classes in the control group.

The experiment was conducted at higher educational institutions as follows:

Chernihiv Collegium National University named after T. G. Shevchenko.

Communal institution of higher education „Dnipro Academy of Continuing Education" of the Dnipropetrovsk Regional Council".

University of Regional Development and Banking Institute, AMBIS, a.s. Vyská škola, Department of Security and Law· Lindnerova 1, Prague, Czech Republic.

While preparing for the experiment, two cohorts of students were randomly chosen through a selection process. During the selection process, factors such as the comparable level of students' knowledge and their potential for future academic pursuits were carefully

considered. In the control group (hereinafter referred to as CG), training took place using traditional educational methods, whereas another group (hereinafter EG) was engaged in using the project method. This enabled a comparative analysis of the efficacy of professional competence formation processes, utilizing pre-existing validated methodologies. The above number and composition of the sample made it possible to say that the research data are valid and reliable.

3.3 DATA ANALYSIS

The study applied the practical methods outlined below:

Methodology «Diagnosis of creativity» (E. Torrens)

The test is a method of researching creative activity and realizing the individual's creative potential.

The «Unfinished Thesis» method (J. Sachs, S. Levy)

To determine the level of communication.

Questionnaire for self-evaluation of students' knowledge and skills when transitioning to training using new technology (N.V. Nemova).

Methodology for assessing the basic competencies (L.A. Adambayeva). The respondents were asked to evaluate the level of knowledge, the ability to develop software and methodological support, and the ability to solve practical tasks in the framework of the project method, according to the following criteria (Table 2):

Table 2 – The criteria for the method of basic levels assessment

0	I have no idea about the said knowledge and skills
1	I have some ideas about these knowledge and skills
2	I have some knowledge and skills, but they are not enough to successfully implement a new technology
3	I have knowledge and skills, which, most likely, will be sufficient for the successful implementation of a new technology
4	I have knowledge and skills sufficient for the successful implementation of new technology

Source: Elaborated by the authors (2023).

3.4 DATA COLLECTION

At the beginning of the experiment, two statistical hypotheses were formulated, where:

H0 presumes that the difference between the $O_{exp\ i}$ and O_{contr} indicators is insignificant for all levels of position formation, i={1, 2, 3}.

H1 presumes that the values of O_{exp} and O_{contr} will be significantly different at the level of statistical significance.

The χ2 test was used to test H0. The value of the Kendall T statistical criterion was found using the formula 1:

$$T = \frac{1}{n1*n2}\sum_{i=1}^{3}\frac{(n1*Oexpi - n2*Ocontri)^2}{Oexpi+Ocontri}, \quad (1)$$

where n_1*n_2 – the number of CG and EG respondents;

$O_{exp\ i}$ ($O_{contr\ i}$) – the number of CG and EG respondents who were in one of the groups;

i =1 – corresponds to a high level of the aesthetic position formation,

i=2 – an average level,

i=3 – a low level.

The quantitative data obtained as the study findings are measured according to the rank scale.

A criterion was selected for the calculation χ^2, which was determined by the formula 2 as follows:

$$\chi^2 = (f_1 - f_2)^2/(f_1 + f_2), \quad (2)$$

where:

f 1 i f 2 - frequencies of compared samples (Plomp).

3.5 INSTRUMENTS

The study results were processed using Statistica software.

Google Forms were used for the survey.

3.6 ETHICAL CRITERIA

Prior to the study onset, written consent was obtained from teachers and students. Personal data of the were are strictly confidential. Participation in the study was voluntary and free of charge.

4 RESULTS

Implementation of the project method in EG was carried out in compliance with the following requirements:

availability of the necessary material in public access;

a sufficient amount of time to complete the project, considering the individual features of the students;

the possibility to use the recommendations elaborated by the teacher;

The formulation of project topics ought to be designed in a manner that engenders interest and encourages students to autonomously acquire novel knowledge, grounded on their own experiential background;

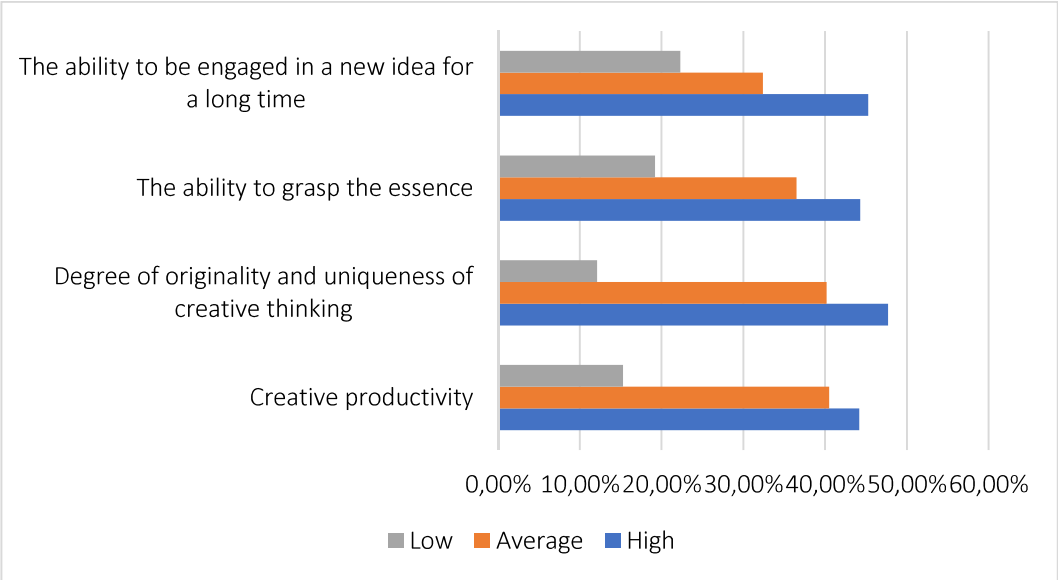
project work should take place in a friendly atmosphere, cooperation and respect, without pressure on project participants and ensuring training flexibility;

students can solicit external resources from entities beyond their educational institution(e.g., museums, libraries, publishing houses, etc.);

the final presentation of the project was carried out in the form of a demonstration and commenting on a poster created by students, or a demonstration of one's own model in accordance with the chosen topic of the project. It should be noted that any of ICT tools could also be used.

While diagnosing the creative component of educational activity, the evaluation encompassed all the knowledge acquired by students during their study of various academic disciplines. The Torrens test is aimed at identifying the level of development of the activity component of the students' aesthetic position. The obtained results are presented in Figure 1.

Figure 1 – Distribution of students based on the development levels in their cognitive sphere while utilizing the project method

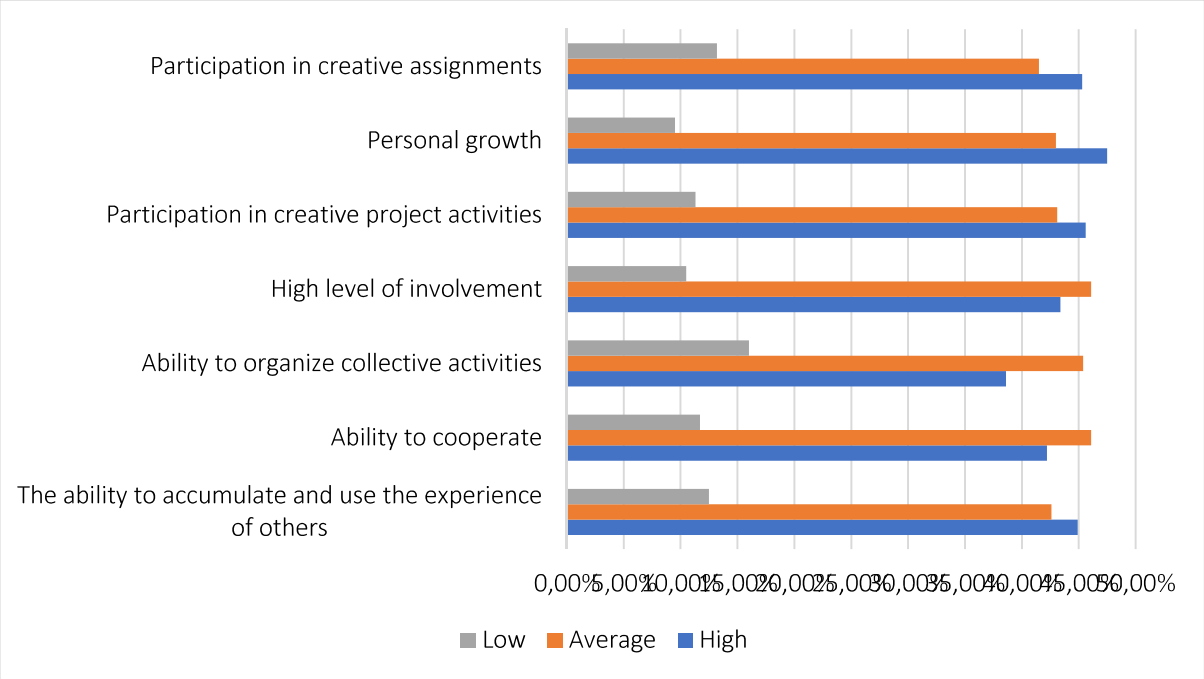


Source: Elaborated by the author (2023).

The obtained data indicate that by the end of the experiment, the majority of students (EG) had acquired creative productivity and also demonstrated a high degree of originality and uniqueness of creative thinking. Notably, 81% of respondents at medium and high levels have developed the ability to grasp the essence of the problem, and 78% of students can be engaged in a new idea for a long time. The results indicate that the majority of students are inclined to manifest a heightened level of creative activity when using the project method in education.

The level of communication of students was determined using the observation method. It includes the ability to absorb and use the experience of others, as well as the ability to cooperate. Figure 2 was elaborated drawing on the obtained results of observations method and students' answers.

Figure 2 – The EC distribution according to the formation level of students' cognitive activity communicative component while utilizing the project method



Source: Elaborated by the author (2023).

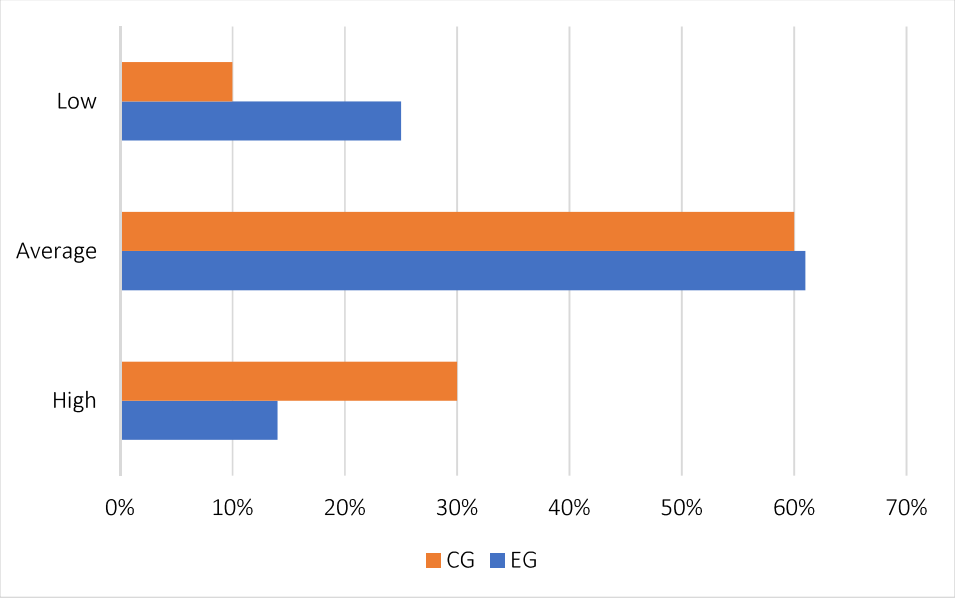
It was found that on average, 90% of EG had exceptionally developed abilities to analyze and use the experience of others, 88% of students show the ability to cooperate and help each other. Summing up, it is possible to draw a conclusion about the high formation level of the students' cognitive activity communicative component among the students of the experimental group.

In the course of the project activity, it was decided to divide the students of the experimental group into 4-5 individuals in order to create comfortable conditions for the emergence of emotional contact between them. This was done to facilitate effective communication and reciprocal support, while also fostering a dynamic competitive environment. During the individual form of work with each student separately, there were also positive interaction results. Notably, this organization format proved effective only in setting the tasks for the project activity when compared to other formats. Students of the experimental group demonstrated a high level of cognitive competence during various activities (seminars, lectures, independent assignments). The study revealed significant dynamics in epistemological competence formation between its beginning and end (on a scale of 10 points). Additionally, positive develop-

ment trends were observed in all components of cognitive competence among EG students throughout the experiment.

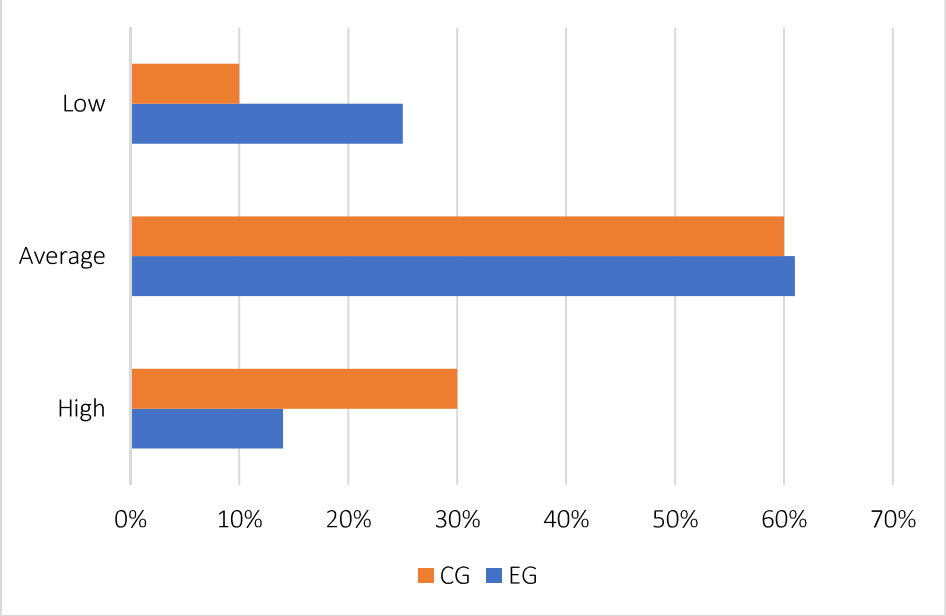
At the end of the experiment, the number of students with high and medium levels of development of all components of professional competence increased. It was determined that at the end of the experiment there were three times more students with a high level of cognitive competence than before the experiment. The number of EG students with a low level of cognitive competence decreased by 4.1 times. Summarizing the obtained data, graphs were elaborated to visualize the results (Figure 3, 4).

Figure 3 – Results of EG and CG according to the formation levels of cognitive competence at the beginning of the experiment while utilizing the project method



Source: Elaborated by the author (2023).

Figure 4- Results of EG and CG according to the levels of cognitive competence formation at the end of the experiment while utilizing the project method



Source: Elaborated by the author (2023).

To determine the effectiveness of pedagogical conditions in the formation of professional competence in project activities, there was a notable improvement in the progress of every student enrolled in the EG. The obtained results testify to the effective implementation of the conceptual model of the process of formation of professional competence among students during project activities. The distribution of χ2 and the reliability test of the H0 hypothesis are shown in Table 3.

Table 3 – Distribution of χ^2

Value	CG before	CG after	EG before	EG after
1	13	12	14	5
2	16	16	20	23
3	4	5	4	10

Source: Elaborated by the author.

The obtained values show that the selected scale and criterion (χ2) for testing the hypothesis and the data entry method are consolidated data, the values of the level of cognitive competence formation are entered in the «value» column: high - 2, medium - 1, low- 0.

While conducting the analysis (Table 4), the characteristics of the compared samples were established. The tabular value of Kendall's criterion for the significance level of p=0.05 corresponds to the value of T_{crit} =5.99 for the distribution of the criterion as per the diagram (2*3).

Table 4 – Kendall's criterion values

	CG (before the experiment)	CG (after the experiment)	CG (before the experiment)	CG (after the experiment)
EG (before the experiment)		Empirical value 0.6454, critical 5.881.*	Empirical value 0.0429, critical 5.881.*	Empirical value 6.1823, critical 5.881.**
EG (after the experiment)	Empirical value 0.6454, critical 5.881.*		Empirical value 0.9927, critical 5.881.*	Empirical value 9.6637, critical 5.881.**
EG (before the experiment)	Empirical value 0.0328, critical 5.881.*	Empirical value 0.9826, critical 5.881.*		Empirical value 11.0914, critical 5.881.**
EG (after the experiment)	Empirical value 9.6637, critical 5.991.**	Empirical value 6.1823, critical 5.991.**	Empirical value 11.0914, critical 5.991.**	

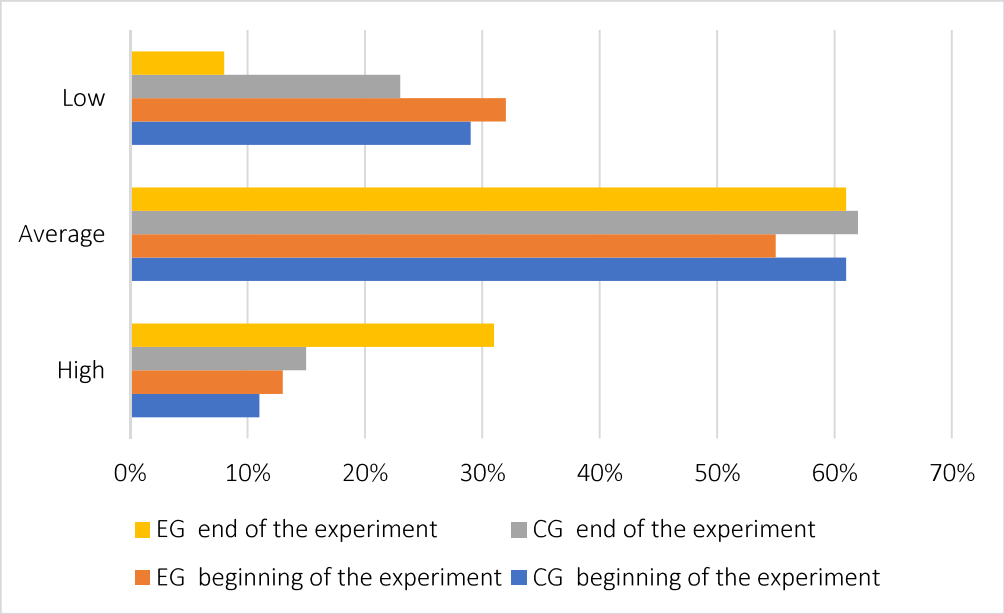
Note: * p=0,05; **The reliability of the difference in sample characteristics is 95%.

Source: Elaborated by the author (2023).

Table 4 shows that the statistical value T>T is critical. The results reject the initial hypothesis H0. Notably, the obtained results of CG and EG have a statistical deviation. This enables us to verify the efficacy of the chosen project methodology when instructing humanitarian subjects. Figure 5 visualizes the tendency to increase the level of formation of professional competences in EG.

Thus, it can be stated that EG students who utilized the project-based approach exhibited a stronger inclination towards developing professional aptitude.

Figure 5 – Consolidated values of the professional competence formation in CG and EG students while utilizing the project method



Source: Elaborated by the author (2023).

5 DISCUSSION

The principal goal of the project method is to create pedagogical conditions under which the student's individual experience is formed in accordance with the chosen discipline. The main orientation of the project method is its focus on students' independent activity. While conducting the current study, the groups of students tackled specific problems that required the integration of acquired knowledge and skills.

Having conducted the experiment and processed the obtained results, the formulated hypothesis H1 was confirmed, namely: "After implementing the project method, students' engagement in studying humanitarian disciplines will increase, the level of motivation and understanding of the material will enhance".

We share the standpoint of Díaz-García *et al*. (2022) that the use of the project method while teaching the humanities contributes to the formation of professional interests of students, as well as the opportunity to integrate a specific assignment into the framework of future professional activity (Díaz-García *et al*., 2022; Ferreira, Canedo, 2020). According to Lim et al. (2022), a crucial step for the integration of the project method in elementary subjects is the main principle of education, namely «learning through action». In compliance with this principle, there is constant study and research of something new (Ivetić, Ilić, 2020; LIM et al., 2022). Our study confirmed this conclusion, as the students noted that one of the exciting elements of the project-based learning method was their active involvement in the process of addressing professional problems.

The research revealed that the main condition for implementing the project method in the educational process is the ability to organize a collective form of activity that requires the implementation of an educational influence that will be tailored to the individual characteristics of students and enhance the efficacy of joint activities. These findings confirm the results obtained by Fernandes, Dinis-Carvalho and Ferreira-Oliveira (2021), who elucidated that collective activity improves the level of student success (Fernandes, Dinis-Carvalho, Ferreira-Oliveira, 2021; Requies *et al*., 2018).

Moreover, one of the pivotal factors is the positive motivation of students for project activities. It is also important to form a permanent use of the system of project tasks, which will improve motivation to independently solve professional tasks. Rolinska (2021) emphasizes the crucial role of the project method in the educational process. The use of this method enables enhancement of pedagogical instruction, encourages students to work actively, to show creativity and self-awareness, and also forms the skills of both independent and group work, short-term and long-term planning, and self-evaluation (Bryndin, 2019; Laval *et al*., 2021; Rolinska, 2021).

In the course of the conducted research, it was determined that implementation of innovative approach in project endeavours can be regarded as a successful development of expertise in the field. The qualitative advancement observed during project-based learning among intellectually curious students was essential. The implementation of project technology in educational settings has played a significant role in fostering students' professional self-determination. By providing a hands-on learning experience, this approach has enabled trainees to develop the skills and knowledge necessary for success in their chosen careers. Through projects, students have been able to explore their interests and gain a sense of direction regarding their future career paths. Obviously, project technology has had a positive impact on students' professional development and is an effective tool for promoting self-determination among learners. As part of the curriculum, students were encouraged to solve real professional problems in which they developed professional skills (Calonge *et al*., 2022; Yaccob, Yunus, Hashim, 2022).

6 CONCLUSION

Participation in project activities during training sessions enhances students' proficiency in identifying and organizing the key phases of a professional task, fosters better planning skills for individual assignments, facilitates accurate estimation of personal time and resources, promotes prioritization of critical tasks, and enables effective evaluation of work quality and efficiency.

The conducted research confirmed the hypothesis that implementing the project method is a productive approach for comprehending and utilizing material from humanitarian disciplines in professional settings. The study has additionally given a valuable insight that adopting the project method can positively impact various personal factors among students, including motivation to master new material, raise their self-esteem, enhance flexibility and social aptitude.

The practical significance of the findings lies in their potential application within higher education institutions as educators endear to modernize practical classes through incorporating project-oriented techniques into the learning process. Subsequent investigations could be directed towards evaluating the efficacy of gamified approaches when teaching humanitarian subjects.

REFERENCES

ABAD-SEGURA, E.; GONZÁLEZ-ZAMAR, M. D.; INFANTE-MORO, J. C.; RUIPÉREZ GARCÍA, G. Sustainable management of digital transformation in higher education: Global research trends. **Sustainability**, v. 12, n. 5, p. 2107, 2020.

ABELHA, M.; FERNANDES, S.; MESQUITA, D.; SEABRA, F.; FERREIRA-OLIVEIRA, A. T. Graduate

employability and competence development in higher education – A systematic literature review using PRISMA. **Sustainability**, v. 12, n. 15, p. 5900, 2020.

ANISIMOVA, E. Digital Literacy of Future Pre-school Teachers. **Journal of Social Studies Education Research*, v. 11***, n. 1, p. 230-253, 2020. Available at: <https://www.learntechlib.org/p/216438/> Access on: 15 August 2023.

BERNATE, J.; VARGAS, J. Challenges and trends of the 21st century in higher education. **GUNi Newsletter**, v. 26, p. 141–154, 2020.

BERRY, D. M.; FAGERJORD, A. **Digital humanities: Knowledge and critique in a digital age.** Cambridge: Polity Books, 2017. doi: 10.1515/commun-2020-2083.

BRYNDIN, E. Creative innovative higher education of researchers with flexible skills and synergy of cooperation. **Contemporary Research in Education and English Language Teaching**, v. 1, n. 1, p. 1-6, 2019.

CALONGE, S. D.; CONNOR, M.; HULTBERG, P.; SHAH, M. A.; MEDINA-AGUERREBERE, P. Contactless Higher Education: A SWOT Analysis of Emergency Remote Teaching and Learning during COVID-19. **Journal of Educational Studies and Multidisciplinary Approaches**, v. 2, n. 1, p. 17-36, 2022. doi: 10.51383/jesma.2022.22.

DAMINOVA, G. Interactive technologies in teaching a foreign language. **Archives**, v. 4, n. 1, 2020.

DÍAZ-GARCÍA, V.; MONTERO-NAVARRO, A.; RODRÍGUEZ-SÁNCHEZ, J. L.; GALLEGO-LOSADA, R. Digitalization and digital transformation in higher education: A bibliometric analysis. **Frontiers in Psychology,** v. 13, 2022. doi: 10.3389/fpsyg.2022.1081595.

DUBROVINA, L.; LOBUZINA, K.; ONYSHCHENKO, O.; BORIAK, H. Digital humanitarian project as a component of digital humanities. **Science and Innovation**, v. 17, n. 1, p. 54–63, 2021. doi: 10.15407/scine17.01.054.

EDMOND, J.; MORSELLI, F. Sustainability of digital humanities projects as a publication and documentation challenge. **Journal of Documentation**, 2020. doi: 10.1108/JD-12-2019-0232.

FERNANDES, S.; DINIS-CARVALHO, J.; FERREIRA-OLIVEIRA, A. T. Improving the Performance of Student Teams in Project-Based Learning with Scrum. **Education Sciences**, v. 11, n. 8, p. 444, 2021. doi: 10.3390/educsci11080444.

FERREIRA, V. G.; CANEDO, E. D. Design sprint in classroom: exploring new active learning tools for project-based learning approach. **Journal of Ambient Intelligence and Humanized Computing**, v. 11, p. 1191-1212, 2020.

GARDINER, E.; MUSTO, R. **Digital Environments. The Digital Humanities.** Cambridge: Cambridge University Press, 2015. p. 82-96. doi: 10.1017/CBO9781139003865.

IVETIĆ, P.; ILIĆ, J. Reinventing universities: Agile project management in higher education. **European Project Management Journal,** v. 10, p. 64-68, 2020.

KOBERNYK, O.; KOLOMIIETS, N.; KOMAR, O.; ROIENKO, L.; BAIDIUK, L. Project Method Efficiency for the Teachers' Professional Activities. **Journal of Curriculum and Teaching**, v. 11, n. 1, p. 73-86, 2022. doi: 10.5430/jct.v11n1p73.

LAVAL, J.; FLEURY, A.; KARAMI, A. B.; LEBIS, A.; LOZENGUEZ, G.; PINOT, R.; VERMEULEN, M. Toward an innovative educational method to train students to agile approaches in higher education: The alpes. **Education Sciences**, v. 11, n. 6, p. 267, 2021.

LEAL FILHO, W.; RAATH, S.; LAZZARINI, B.; VARGAS, V. R.; DE SOUZA, L.; ANHOLON, R.; ORLOVIC, V. L. The role of transformation in learning and education for sustainability.

Journal of cleaner production, n. 199, p. 286-295, 2018.

LEE, S.; KIM, H.; JEONG, B.; YOON, J. A Training Method for Low Rank Convolutional Neural Networks Based on Alternating Tensor Compose-Decompose Method. **Applied Sciences,** v. 11, n. 2, p. 643, 2021. doi: 10.3390/app11020643.

LIM, C. K.; HAUFIKU, M. S.; TAN, K. L.; FARID AHMED, M.; NG, T. F. Systematic Review of Education Sustainable Development in Higher Education Institutions. **Sustainability**, v. 14, p. 13241, 2022. doi: 10.3390/su142013241.

MALISUWAN, S.; KAEWPHANUEKRUNGSI, W.; MILINDAVANIJ, D. Digital divide in Thailand: Analysis and recommendations. **International Journal of Advanced Research in Engineering and Technology,** v. 7, n. 1, p. 41-46, 2016.

MUENSTER, S. Digital 3D Technologies for Humanities Research and Education: An Overview. **Applied Sciences**, v. 12, n. 5, p. 2426, 2022. doi: 10.3390/app12052426.

ORDAZ GONZÁLEZ, G. J.; BRITT MOSTUE, M. Paths toward a non-traditional teaching of chemistry. **Actualidades Investigativas en Educación,** v. 18, n. 2, p. 559-579, 2018.

RAMOS-ESCUDERO, M.; HUERTA CAMONES, R. T.; RAMOS-ESCUDERO, F.; GONZÁLES CHAVESTA, C. Efecto del método de proyectos sobre el aprendizaje de química industrial. **Educación química,** v. 33, n. 1, p. 116-126, 2022.

REQUIES J. M.; AGIRRE I.; BARRIO V. L.; GRAELLS M. Evolution of project-based learning in small groups in environmental engineering courses. **Journal of Technology and Science Education,** v. 8, n. 1, p. 45-62, 2018.

ROLINSKA, H. H. Using project method for the purpose of educating future music teachers. **Linguistics and Culture Review,** v. 5, n. S2, p. 387-400, 2021. doi: 10.21744/lingcure.v5nS2.1361.

SILVA M. F.; MALHEIRO B.; GUEDES P.; DUARTE A.; FERREIRA P. Collaborative Learning with Sustainability-driven Projects: A Summary of the EPSAISEP Programme. **International Journal of Engineering Pedagogy,** v. 8, n. 4, p. 106-130, 2018.

SOOMRO, K. A.; KALE, U.; CURTIS, R.; AKCAOGLU, M.; BERNSTEIN, M. Development of an instrument to measure Faculty's information and communication technology access (FICTA). **Education and Information Technologies,** v. 23, n. 1, p. 253–269, 2018. doi: 10.1007/s10639-017-9599-9.

TØMTE, C. E.; FOSSLAND, T.; AAMODT, P. O.; DEGN, L. Digitalisation in higher education: mapping institutional approaches for teaching and learning. **Quality in Higher Education,** v. 25, p. 98–114, 2019. doi: 10.1080/13538322.2019.1603611.

YACCOB, N. S.; YUNUS, M. M.; HASHIM, H. The Integration of global competence into Malaysian English as a second language lessons for quality education (Fourth United Nations sustainable development goal). **Frontiers in Psychology,** v. 13, p. 848417, 2022.

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