European Journal of Contemporary Education

ELECTRONIC JOURNAL

Perception of the Flipped Classroom Model by Students in the Process of Studying Humanities Disciplines

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Abstract

The improvement of the educational process requires continuous monitoring students' perception of the method of training, determining the factors affecting their satisfaction, and ensuring their positive attitude to learning. The study aims to assess the level of satisfaction of future specialists with the flipped classroom blended learning model implemented in their learning process. The participants were 104 second-year students from various humanities disciplines at a university in Moscow, Russia. The study employed a pedagogical quasi-experiment and a survey as primary research methods. The quasi-experiment was conducted over the second semester of the 2022–2023 academic year, during which the flipped classroom blended learning model was implemented. The survey included questions on various aspects of satisfaction and efficiency of learning, with responses given on a 5-point Likert scale. Based on a theoretical analysis, factors influencing student satisfaction with blended learning and conditions for its effective deployment were established and utilized in introducing the flipped classroom model into specialist training. A survey showed that over two-thirds of the students are satisfied with the flipped classroom model. Furthermore, most students give a positive assessment of the outcomes of their professional development (theoretical knowledge, new practical skills, intention to apply the obtained results in future professional practice, and opportunities for improving the quality of future professional work). A positive correlation is discovered between students' satisfaction and self-assessed learning outcomes. Moreover, student satisfaction is found to positively correlate with academic performance. The obtained findings give reason to recommend the flipped classroom blended learning model to be introduced into the process of specialist training based on the proposed structure.

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Keywords: blended learning, flipped classroom, assessment system, satisfaction with learning, learning success.

1. Introduction

The contemporary educational environment is undergoing major innovations, which brings to the fore students' perception of the learning process (Avdeeva et al., 2022; Gadzaova et al., 2023; Golubeva et al., 2023). In this context, ensuring that students have a positive perspective on the method of their training becomes a significant and topical pedagogical problem, as it can improve not only the overall educational atmosphere and motivation but also learning outcomes (Belous et al., 2021; Vdovina et al., 2021). The explosive development of information technology has boosted the popularity of distance learning methods and blended learning models in the system of vocational training of specialists (Nikolaeva et al., 2023; Yumashev et al., 2021).

However, the attitude of students to such methods is ambiguous. In a study by N.Z. Martinjak (2023), part of the students deemed the efficiency of their training to decrease after the introduction of distance learning. Students' motivation and attendance were found to decrease, their learning activities and training methods had become less diverse, independent work no longer satisfied them, and learning became insufficiently problem-based (Korotaeva, Kapustina, 2022; Uralbaeva et al., 2023). Data indicating that students are not sufficiently engaged and drop out of distance learning point to an additional indirect factor in their lack of satisfaction with learning based on information technology (Akhmetshin et al., 2021; Goyushova, Kapustina, 2022; Rabadanova et al., 2022).

A systematic review by A. Atmacasoy and M. Aksu (2018) presents conflicting results, noting that some studies demonstrate positive attitudes to blended learning while others do not. Some respondents express concern when using information technology and argue that blended learning does not contribute to motivation.

The knowledge obtained from this study will contribute significantly to both scientific and practical education by:

– Providing empirical evidence on the effectiveness of the flipped classroom model, identifying factors that influence student satisfaction, and offering insights into how blended learning impacts student motivation and academic performance.

– offering a structured framework for implementing the flipped classroom model, highlighting best practices, and providing actionable recommendations for educators. By understanding student perceptions and satisfaction levels, educators can tailor their teaching strategies to enhance learning outcomes and engagement.

Therefore, students' positive attitude towards the training method is an important factor affecting their motivation, engagement, and efficiency. Accordingly, research into the specific features of how future specialists in education and pedagogy perceive the flipped classroom model of blended learning is topical and practically significant.

2. Literature review

In pedagogical research, great attention is paid to determining the features of students' perception of their learning process. T.N. Bochkareva et al. (2020) found students' perception of teachers to affect the results of learning. D.K. Shah et al. (2019) focused their research on students' perception of learning, teachers, and the general atmosphere, as well as the features of students' academic and social self-perception, and based on the obtained results concluded the learning conditions to be satisfactory.

The introduction of blended learning involves a combination of traditional and online forms of educational process organization (Riczu et al., 2023). Researchers argue that the main reasons behind the efficiency of blended learning lie in the balance of online and in-person components, as well as student-lecturer and student-student interaction (Le, Pham, 2021; Wagner et al., 2023).

S. Pivneva et al. (2023) present a systematic analysis of various studies on the application of blended learning, concluding that blended learning has a positive effect on academic performance, social interaction, and feedback, improves group and reciprocal learning, and fosters a positive attitude to e-learning among future teachers.

According to a classification developed by L.Y. Belenkova et al. (2022), blended learning encompasses the rotation model (station rotation, laboratory rotation, flipped classroom, individual rotation), the flex model, the self-blended model, and the enriched virtual model.

Several studies examine the results of the application of the flipped classroom model of blended learning. Under the flipped classroom method, work that is usually performed in class at lectures is done at home (studying the content of the course using online tools) and homework is covered in the classroom (practical exercises, critical analysis, etc.) (Evans et al., 2020). The results of the introduction of the flipped classroom model show that students who study under this model score higher in the final examination. They feel well-prepared and confident, note greater satisfaction and a more positive learning environment, and value the opportunity to study at their own pace (Bolina et al., 2022). C. Little discovered a positive effect of the flipped classroom model on academic performance in a small group of students. Little noted the benefits of the fact that students were able to pause and rewind educational videos for better comprehension. The real advantages of this model, however, lie in much greater opportunities for active experimental learning and the development of higher-order cognitive skills (Babintseva et al., 2023). A.T. Steen-Utheim and N. Foldnes (2018) in their study emphasized the affective aspect of student engagement in the application of the flipped classroom. Their results indicate a more positive learning experience and greater engagement of students under flipped learning. The findings indicate that the emotional aspect of engagement is especially high in students' assessment of their learning in the flipped classroom.

Research has found that the most common reasons for a positive perception of the experience of blended learning are learning with the use of video materials (Tretyakova et al., 2023); the ability to study at one's own pace (Asghar et al., 2022); flexibility and mobility provided by the available video lectures (Denisova et al., 2023; Uteuliyev et al., 2023); and easier and more efficient learning in the flipped classroom (Ling et al., 2023).

The reasons behind students' perception of flipped learning as more active and efficient are associated with 1) the availability of video lectures (opportunity to think and study at their own pace) (Turanin, Posokhova, 2023); 2) more content-dense classroom sessions focused on practice and controlled by teachers (Baideldinova et al., 2021; Engelbertink et al., 2020); and 3) greater support for learning processes through interaction with teachers and peers in and outside the classroom through Moodle (Boelens et al., 2018).

However, little research attention has been paid to the application of the flipped classroom model of blended learning in student training and their attitudes to this form of work.

The purpose of our research is to establish the satisfaction of future specialists with the flipped classroom blended learning model implemented in their learning process.

The research hypothesis tested is that as a result of the implementation of the model, students' satisfaction with blended learning will closely correlate with learning outcomes and academic performance.

3. Methods

The set research goal was achieved through a set of methods, which included analysis of psycho-pedagogical and scientific methodological literature, a survey, and a pedagogical quasi-experiment (Syzdykova et al., 2022).

The primary research method was the pedagogical quasi-experiment, which was conducted over the second semester of the 2022–2023 academic year.

This study included 104 second-year students who were randomly selected to participate. The selection aimed to ensure a representative sample of students who had similar levels of academic experience and were part of pre-existing academic groups from various humanities disciplines. The ages of the participants ranged from 19 to 21 years old, with a gender distribution of approximately 60 % female and 40 % male.

The quasi-experiment proceeded in several stages (Table 1).

Table 1. Stages of the pedagogical quasi-experiment

Stage	Content
Preparatory	Determination of the relevance, goal, objective, object, and subject of the experiment
Organizational	Preparation of methodological support, selection of participants, development of the structure of the flipped classroom model
Practical	Implementation of the flipped classroom blended learning model
Summarization	Assessment of results (student survey, academic performance assessment)

The general structure of the flipped classroom is presented in Table 2.

Table 2. Structure of the developed flipped classroom model

Stage	Types of activities during the stage
I General organization	Explanation of requirements, the peculiarities of work, the structure of the course, and the specifics and advantages of flipped learning
II Independent online homework	– Introduction to the topic: problem task, short video, or mini-presentation; – Study of theoretical material by working with methodological materials on the distance learning platform and electronic library resources; – Study of theoretical material using various video materials chosen by teachers on the topics using free Internet resources like YouTube and TED.com; – Consultative support for students in the group by the teacher via chats, forums, e-mail, and messengers
	Control of learning outcomes: online testing on theoretical materials that have been covered in the relevant topic or assignments
III Joint work of the group in the classroom	Actualization of knowledge through control activities at the beginning of classroom work (a mini lecture to be given by one of the students, summary assignments, general discussion with answers to problem questions)
	– Individual practical work on problem tasks, specific practical cases, exercises, and assignments; – Practical group work with joint discussions, debates, brainstorming, and role-playing with the exchange of ideas, opinions, and experiences and a search for optimal solutions
	Consolidation of the results of training: a short summarizing reflective exercise on the topic with brief responses on the new experience, the possibilities of its practical application, and what the student liked and remembered or disliked and found challenging

Joint work of the academic group in the classroom was carried out in a synchronous distance mode using the Moodle distance learning system. As can be seen from Table 2, the conditions of organization of the flipped classroom model were maintained. Individual assignments at the practical stage not only diversified the types of activities but facilitated more active work. Before joint discussions, each student had the opportunity to decide on their point of view and reflect on solutions and their arguments.

To establish the specifics of students' perception of the blended learning model under which they were trained, an anonymous survey was conducted.

The survey consisted of two blocks. The block devoted to satisfaction included five questions addressing various aspects of blended learning:
– Are you satisfied with the quality and content of the materials presented to you?
– Do you find the distribution of the different types of activities satisfactory?
– Are you satisfied with the quality of interpersonal interaction and interactivity?
– Are you satisfied with individual work with electronic resources?
– Are you satisfied with the overall organization of blended learning?

In the block of questions dealing with efficiency, respondents were asked to assess their achievements:
– Do you remember the theoretical content of the course?
– Have you gained new skills that you could apply in practice?
– In your opinion, will you be able to use the obtained learning outcomes in future professional practice?
– In your opinion, has the studied course contributed to the quality of your future professional work?

Responses to all survey questions were given on a 5-point Likert scale: 5 – strongly agree, 4 – agree, 3 – neutral, 2 – disagree, 1 – strongly disagree.

Academic performance was determined by the formula: (number of "excellent" grades + number of "good" grades x 0.64 + number of "satisfactory" grades x 0.36 + number of "passing" grades x 0.16 + number of "not passing" grades x 0.08) x 100%/total number of students.

The results of the quasi-experiment were processed using mathematical statistics methods. The objective was to establish the presence or absence of a relationship between students' satisfaction with blended learning, their learning outcomes, and academic performance. For this purpose, we applied the Kolmogorov-Smirnov test and Spearman's rank correlation coefficient.

4. Results

The results of the survey block on satisfaction with blended learning are presented in Table 3.

Table 3. Results of the survey on respondents' satisfaction with blended learning

Respondents' satisfaction	Responses				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Quality and content of materials	6 (5.8 %)	16 (15.0 %)	12 (11.9 %)	24 (23.1 %)	46 (44.2 %)
Distribution of types of work	6 (5.5 %)	12 (11.5 %)	14 (13.8 %)	46 (44.2 %)	26 (25.0 %)
Interpersonal interaction and interactivity	4 (3.7 %)	7 (6.3 %)	22 (21.2 %)	40 (38 %)	32 (30.8 %)
Individual work with electronic resources	2 (2.0 %)	12 (11.5 %)	10 (9.6 %)	47 (44.8 %)	33 (32.1 %)
Overall organization of blended learning	6 (5.8 %)	6 (5.8 %)	16 (15.3 %)	40 (38.2 %)	37 (34.9 %)

As demonstrated in Table 3, most respondents (44.2 %) were completely satisfied with the quality and content of the presented materials. Another 23.1 % responded, "agree".

Results on the question about the distribution of work between different types of activities show that most of the respondents were somewhat satisfied (44.2 %). In total, satisfaction with the distribution of different types of activities (5 and 4 on the Likert scale) was expressed by 69.2 %.

Most of the respondents were somewhat satisfied (38 %) or completely satisfied (30.8 %) with opportunities to actively communicate and interact provided during the course. Another 21.2% reported "neutral" satisfaction. Dissatisfaction with the quality of interaction was expressed by 10% of the respondents.

Concerning individual work with electronic resources, the largest part of the students were somewhat satisfied or completely satisfied with the quality of this type of work (76.9 %). Only a minor share of students expressed neutral satisfaction (9.6 %) and relative (11.5 %) or complete (2%) dissatisfaction.

Responding to the question "Are you satisfied with the overall organization of blended learning?", most of the future specialists in education and pedagogy reported being satisfied: points 5 and 4 on the Likert scale were picked by 73.1 %. A small number of students – 5.8 % each – remained somewhat or completely dissatisfied.

Analyzing the results of the survey, we can conclude that the lion's share of the surveyed students had an overall positive perception of the blended learning model. Most of the received responses to all the survey questions were either "strongly agree" or "agree". The total sum of these responses ranged from 67.3 to 76.9 %. The greatest satisfaction was expressed with regard to individual work with electronic resources and the overall organization of blended learning (arithmetic mean of the responses – 3.94 and 3.9 points, respectively).

Next, let us consider the results of the survey on the efficiency of learning (Table 4).

The data provided in Table 4 show that students generally rated their theoretical knowledge after taking the course highly: 42.3 % saw their memorization of the theoretical content of the course as somewhat good and 28.8 % – as good.

Table 4. Results of the survey on efficiency

Efficiency	Responses				
	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Theoretical knowledge	3 (3.1 %)	8 (7.6 %)	19 (18.2 %)	44 42.3 %)	30 (28.8 %)
New practical skills	4 (3.8 %)	6 (5.8 %)	32 (30.8 %)	30 28.8 %)	32 (30.8 %)
Application in future professional practice	4 (3.8 %)	6 (5.8 %)	18 (17.3 %)	42 40.2 %)	34 (32.9 %)
Improvement of the quality of teaching in the future	4 (4.2 %)	10 (9.8 %)	13 (12.7 %)	52 50.0 %)	24 (23.3 %)

An approximately equal share of students completely agreed (30.8 %), somewhat agreed (28.8 %), and moderately agreed (30.8 %) that they had gained new practical skills. Thus, one-third of the respondents believed they had obtained entirely new skills and a total of almost 60 % gave a positive answer to this question.

An intention to use the obtained learning outcomes in future professional practice was demonstrated by 73.1 % of students in total and 17.3 % were generally inclined to do so. Few of the survey participants believed they would not utilize the obtained learning outcomes (3.8 %) or expressed doubt (5.8 %).

Over 70 % were convinced that the training received would improve the quality of their professional work in the future.

To choose the right statistical methods to analyze the obtained data, we tested the normality of the distribution of students' responses on satisfaction with the flipped classroom blended learning model using the Kolmogorov-Smirnov test (Table 5).

Table 5. One-sample Kolmogorov-Smirnov test for students' satisfaction
with the blended learning model

		Quality and content of materials	Distribution of types of work	Interpersonal interaction and interactivity	Individual work with electronic resources	Overall organization of blended learning
N		104	104	104	104	104
Normality parameters[a, b]	Mean	3.8512	3.7225	3.8319	3.9393	3.8968
	SD	1.31126	1.14448	1.07880	1.03594	1.12516
Extremum difference	Modulus	.248	.289	.241	.288	.272
	Positive	.191	.148	.141	.155	.163
	Negative	-.248	-.289	-.241	-.288	-.272
Kolmogorov-Smirnov test		1.829	2.104	1.711	2.105	1.908
Asymptotic significance (two-sided)		.002	.000	.006	.000	.001

Notes: a – Comparison with normal distribution, b – Estimated from the data

As can be seen from Table 5, asymptotic significance is less than 0.05, meaning that the distribution of students' answers is non-normal. Therefore, statistical calculations were performed using a nonparametric method.

Accordingly, correlations between the variables were detected via Spearman's test. The results of the calculations are given in Table 6.

Table 6 demonstrates that all assessed variables positively correlate with one another, as all obtained coefficients are above zero. This indicates that respondents' assessments of their theoretical knowledge, new practical skills, intent to apply the learning outcomes in future professional work, and opportunities to raise the quality of future work are significantly connected with their satisfaction with the flipped classroom blended learning model.

Table 6. Correlation between respondent satisfaction with blended learning
and their learning outcomes

Respondents' satisfaction	Outcome block of questions			
	Theoretical knowledge	New practical skills	Application in future professional practice	Improvement of the quality of teaching in the future
Quality and content of materials	.485**	.554**	.646**	.652**
Distribution of types of work	.513**	.548**	.442**	.628**
Interpersonal interaction and interactivity	.626**	.517**	.479**	.611**
Individual work with electronic resources	.439**	.428**	.518**	.561**
Overall organization of blended learning	.608**	.531**	.357**	.572**

Notes: **correlation significant at the level of 0.01

Apart from students' self-assessment of the efficiency of their training, we utilized a more objective indicator – academic performance on a 100-point scale. Results on the correlation of respondents' satisfaction with the flipped classroom model and their academic performance are shown in Table 7.

Table 7. Correlation between respondent satisfaction with blended learning
and their academic performance

Respondents' satisfaction	Students' academic performance
Quality and content of materials	.468**
Distribution of types of work	.449**
Interpersonal interaction and interactivity	.413**
Individual work with electronic resources	.478**
Overall organization of blended learning	.391**

Notes: **correlation significant at the level of 0.01

Table 7 shows that students' satisfaction has a significant positive correlation with their academic performance, as all obtained coefficients are above zero.

5. Discussion
Proceeding from the results of the study, we would like to emphasize the importance of students' positive attitude to the method of training and stress the need to study students' perception of the blended learning model to find ways to improve the model and raise the efficiency of the educational process overall. We believe that students' perception of the training model should be continuously monitored and the factors affecting their satisfaction and the development of a positive attitude to learning need to be determined.

According to our observations, the application of the blended learning model can contribute to the development of such qualities of future specialists in education and pedagogy as a general cognitive-research orientation, high cognitive needs, responsibility, self-organization, and ability to self-learning and self-development, which makes the application of such a model particularly interesting and potentially valuable.

The conducted theoretical analysis suggests that factors in students' positive perspective on the flipped classroom blended learning model include: the combination of the advantages of face-to-face and online learning; the diversity of activities; accessibility, flexibility, and mobility; the ability to study at their own pace; expanded opportunities for interaction with teachers and peers; greater variability in learning; more active learning; a sense of safety and a positive environment; interest in the content of educational materials for independent learning; receiving timely feedback; more

meaningful classroom sessions with a focus on higher-level cognitive activities, broad opportunities for practice and engagement; more effective learning (Bolina et al., 2022).

Importantly, the reviewed studies also report an improvement in students' academic performance as a result of this method (Denisova et al., 2023). Notably, a considerable share of these studies utilize the survey method (Le, Pham, 2021). The conducted analysis allowed us to develop a survey specifically for the present study to investigate the attitudes of future specialists to blended learning and their self-assessment of the obtained results both in knowledge and skills and as readiness to apply the received knowledge in future professional practice.

Another important point is that some of the factors in students' positive perceptions of the blended learning model stem from the essence of this method itself. Among these factors are the combination of the advantages of face-to-face and online learning, the opportunity to study at one's own pace, and accessibility and flexibility. Other analyzed factors can be considered when developing and introducing the blended learning model (diversity of activities, variability, feedback, more effective learning, etc.). The conclusions reached allow us to outline the following conditions for ensuring students' positive perception of and satisfaction with the flipped classroom blended learning model:

– diverse forms of presentation of new educational materials (videos, texts, illustrative materials from different sources with educational and scientific materials on the topic);

– diverse types of activity to improve activity and interest (written and verbal assignments, creating visual content; assignments focusing both on the reproduction of knowledge and problem-based, creative tasks with critical analysis and practical application);

– combination of individual, micro group, and group work;

– support and consultations in independent work, expanding opportunities for interaction and assistance;

– provision of control and feedback.

The last point, in our view, deserves special attention. As indicated earlier, the efficiency of training contributes to students' positive perception of the educational process, which is supported by the findings of J.C. Evans et al. (2020). Our study suggests that the indicator of efficiency of learning (which integrates a variety of factors in education) affects how satisfied the student is with their overall learning experience.

The analyzed sources (Riczu et al., 2023; Steen-Utheim, Foldnes, 2018) indicate that students can have insufficient engagement in the educational process, and if a student comes to class unprepared, the general efficiency of the flipped classroom model undoubtedly decreases. Therefore, it is particularly important to utilize a variety of additional methods of motivation and control. In our study, among these methods were independent extracurricular testing or control tasks after completing the stage of independent online work, brief testing at the beginning of class sessions, and summarizing reflective control exercises at the end of the topic.

Despite the results, limitations must be considered when interpreting the findings of this study. The study was conducted with a small sample size of 104 students, which may limit the generalizability of the findings. Also, the study was conducted in the context of humanities disciplines and may not be directly applicable to other academic disciplines or educational settings with different cultural, institutional, and pedagogical contexts.

6. Conclusion

Considering the features of blended learning will provide for the effective introduction and optimal combination of the forms, methods, and tools of both traditional and distance computer-based and mobile learning in the educational process. The analysis of various blended learning models and the features of their implementation shows their potential capabilities in the organization of specialist training.

The hypothesis put forward in the study was confirmed since we found that more than two-thirds of the surveyed students had a positive view of the flipped classroom blended learning model. The respondents expressed satisfaction with blended learning and rated their achievements high. The correlation analysis showed a significant positive connection between the variables of satisfaction and student self-assessment of their learning outcomes. A significant correlation was also found between student satisfaction and academic performance. The conducted theoretical and experimental analysis demonstrates the significant potential of the flipped classroom blended learning model. Drawing on these findings, we recommend implementing this model based on the

proposed structure in the process of vocational training, particularly as part of developing leadership in future specialists in education and pedagogy. We also believe that the characteristics of students' perception of the learning model should be continuously monitored to obtain timely feedback from students and perfect the educational process. Prospective further research may focus on determining and comparing the efficiency of various blended learning models.

References

Akhmetshin et al., 2021 – *Akhmetshin, E., Vasilev, V., Zekiy, A., Zakieva, R.* (2021). Massive open online courses as the initial stage of development of a digital university. *Journal of Social Studies Education Research*. 12(2): 126-151.

Asghar et al., 2022 – *Asghar, M.Z., Afzaal, M.N., Iqbal, J., Waqar, Y., Seitamaa-Hakkarainen, P.* (2022). Evaluation of in-service vocational teacher training program: A blend of face-to-face, online and offline learning approaches. *Sustainability*. 14(21): 13906. DOI: 10.3390/su142113906

Atmacasoy, Aksu, 2018 – *Atmacasoy, A., Aksu, M.* (2018). Blended learning at pre-service teacher education in Turkey: A systematic review. *Education and Information Technologies, Review*. 23(6): 2399-2422. DOI: 10.1007/s10639-018-9723-5

Avdeeva et al., 2022 – *Avdeeva, T., Muraya, E., Osipovskaya, T., Bugrova, V., Krasnova, O.* (2022). Competence of university teachers in organizing and conducting distance learning at a university. *Revista on line de Política e Gestão Educacional*. 26(00): e022148. DOI: 10.22633/rpge.v26i00.17337

Babintseva et al., 2023 – *Babintseva, E., Kartseva, E., Spynu, L., Tavberidze, D.* (2023). Flipped classroom as an innovative technology for blended learning of professional English in higher education institutions. *Revista on line de Política e Gestão Educacional*. 27(00): e023056. DOI: 10.22633/rpge.v27i00.18526

Baideldinova et al., 2021 – *Baideldinova, G., Zhetpisbayeva, B., Ospanova, B., Tleumbetova, D.* (2021). Improving students' independent work under teacher's supervision during foreign language learning at the university. *European Journal of Contemporary Education*. 10(4): 868-878. DOI: 10.13187/ejced.2021.4.868

Belenkova et al., 2022 – *Belenkova, L.Y., Skudnyakova, Y.V., Bosov, D.V.* (2022). La pedagogía digital en el sistema de educación superior inclusiva [Digital pedagogy in the system of inclusive higher education]. *Interacción y Perspectiva*. 12(1): 27-42. [in Spanish]

Belous et al., 2021 – *Belous, O.V., Kramchaninova, N.V., Shkuropy, K.V., Khludova, L.N., Loba, V.E., Vetrov, Y.P.* (2021). Russian teachers in the digital transformation of general education: Challenges, expectations, and prospects. *Nuances: Estudos Sobre Educação*. 32(00): e021016. DOI: 10.32930/nuances.v32i00.9129

Bochkareva et al., 2020 – *Bochkareva, T.N., Akhmetshin, E.M., Zekiy, A.O., Moiseev, A.V., Belomestnova, M.E., Savelyeva, I.A., Aleynikova, O.S.* (2020). The analysis of using active learning technology in institutions of secondary vocational education. *International Journal of Instruction*. 13(3): 371-386. DOI: 10.29333/iji.2020.13326a

Boelens et al., 2018 – *Boelens, R., Voet, M., De Wever, B.* (2018). The design of blended learning in response to student diversity in higher education: Instructors' views and use of differentiated instruction in blended learning. *Computers & Education*. 120: 197-212. DOI: 10.1016/j.compedu.2018.02.009

Bolina et al., 2022 – *Bolina, M., Naumenko, L., Chelpanova, E., Shmidt, E., Bolshakova, K.* (2022). Implementation of the flipped classroom model in forming students' professional competence. *Revista Conrado*. 18(88): 280-284.

Denisova et al., 2023 – *Denisova, D., Strandstrem, E., Akhmetshin, E., Nikolenko, D.* (2023). Efficiency of various forms of simulation training in the training of medical professionals. *European Journal of Contemporary Education*. 12(3): 788-796. DOI: 10.13187/ejced.2023.3.788

Engelbertink et al., 2020 – *Engelbertink, M.M.J., Kelders, S.M., Woudt-Mittendorff, K.M., Westerhof, G.J.* (2020). Participatory design of persuasive technology in a blended learning course: A qualitative study. The Journal of Education and Information Technologies. 25: 4115-4138. DOI: 10.1007/s10639-020-10147-x

Evans et al., 2020 – *Evans, J.C., Yip, H., Chan, K., Armatas, C., Tse, A.* (2019). Blended learning in higher education: professional development in a Hong Kong university. *Higher Education Research and Development*. 39(4): 643-656. DOI: 10.1080/07294360.2019.1685943

Gadzaova et al., 2023 – *Gadzaova, L., Goverdovskaya, E., Alisultanova, E., Moiseenko, N., Peykarova, N.* (2023). Development of practical measures to improve the qualifications of university teachers in a changing educational environment. *Revista on line de Política e Gestão Educacional*. 27(00): e023058. DOI: 10.22633/rpge.v27i00.18528

Golubeva et al., 2023 – *Golubeva, T., Korotaeva, I., Rabadanova, R., Kovaleva, O.* (2023). Implementing the right to receive education in the context of distance learning technologies. *Relacoes Internacionais no Mundo Atual*. 6(39): e06132.

Goyushova, Kapustina, 2022 – *Goyushova, L., Kapustina, D.* (2022). Adaptation problems during the transition to distance foreign language learning of technical university students. *AIP Conference Proceedings*. 2647: 040025. DOI: 10.1063/5.0104288

Korotaeva, Kapustina, 2022 – *Korotaeva, I., Kapustina, D.* (2022). Specific features of the use of distance learning technologies in foreign language classes with postgraduate students. *International Journal of Emerging Technologies in Learning*. 17(20): 20-33. DOI: 10.3991/ijet.v17i20.30305

Le, Pham, 2021 – *Le, P., Pham, H.* (2021). Using blended learning in teacher training programs: Perspectives of pre-service teachers. *Journal of Educational and Social Research*. 11(2): 115-127. DOI: 10.36941/jesr-2021-0035

Ling et al., 2023 – *Ling, P., Kamasheva, M., Ilina, M., Kozachek, A., Zakirzyanov, A., Shafazhinskaya, N.* (2023). Influence of modern classroom management technologies on improving the activities of class teachers. *Revista Conrado*. 19(95): 480-486.

Martinjak, 2023 – *Martinjak, N.Z.* (2023). Identifying predictors of student satisfaction with distance learning during the COVID- 19 pandemic. *Sodobna pedagogika*. 74(140): 109-124.

Nikolaeva et al., 2023 – *Nikolaeva, E., Kotliar, P., Nikolaev, M.* (2023). Revisiting traditional educational practices in the age of digitalization. *Revista on line de Política e Gestão Educacional*. 27(00): e023057. DOI: 10.22633/rpge.v27i00.18527

Pivneva et al., 2023 – *Pivneva, S., Chernova, O., Abalyan, Z., Shangaraeva, L., Rubannikova, I., Litvinov, A.* (2023). Raising the level of motivation of economics students for studying English using the Myenglishlab blended learning platform. *Revista Conrado*. 19(90): 270-276.

Rabadanova et al., 2022 – *Rabadanova, R., Kagosyan, A., Karmanova, Z., Rabadanova, Z., Titov, V.* (2022). Motivational support as a factor of formation of students' professional competence in the conditions of digitalization of education. *Revista on line de Política e Gestão Educacional*. 26(esp.2): e022052. DOI: 10.22633/rpge.v26iesp.2.16547

Riczu et al., 2023 – *Riczu, Zs., Melypataki, G., Mate, D.A.* (2023). Concepts of work: From traditional social-labor ideas to modern effects of digital transformation. *Journal of Digital Technologies and Law*. 1(1): 175-190. DOI: 10.21202/jdtl.2023.7

Shah et al., 2019 – *Shah, D.K., Piryani, S., Piryani, R. M., Islam, M.N., Jha, R.K., Deo, G.P.* (2019). Medical students' perceptions of their learning environment during clinical years at Chitwan Medical College in Nepal. *Advances in Medical Education and Practice*. 10: 555-562. DOI: 10.2147/AMEP.S203377

Steen-Utheim, Foldnes, 2018 – *Steen-Utheim, A.T., Foldnes, N.* (2018). A qualitative investigation of student engagement in a flipped classroom. *Teaching in Higher Education*. 23(3): 307-324. DOI: 10.1080/13562517.2017.1379481

Syzdykova et al., 2022 – *Syzdykova, M.B., Bimakhanov, T.D., Fursova, V.V., Makhambetova, M.A., Abikenov, Z.O.* (2022). Position of higher education system graduates in the labor market: Search for new opportunities. *Academic Journal of Interdisciplinary Studies*. 11(3): 50-59. DOI: 10.36941/ajis-2022-0067

Tretyakova et al., 2023 – *Tretyakova, G., Arutyunian, V., Ginzburg, O., Azarova, O., Belozerova, E.* (2023). Formation of the speech competence in students – Future economists to the level of independent English proficiency (B2). *Perspectives of Science and Education*. 63(3): 253-270. DOI: 10.32744/pse.2023.3.16

Turanin, Posokhova, 2023 – *Turanin, V., Posokhova, Y.* (2023). Digital transformation's impact on society and the right to education. *Interacción y Perspectiva*. 14(1): 211-220.

Uralbaeva et al., 2023 – *Uralbaeva, S., Rakimzhanova, S., Malikova, A., Abdimaulen, G.* (2023). Reconstructing the European experience of eloquence in the context of pedagogical rhetoric: Philosophical research and cultural studies. *Academic Journal of Interdisciplinary Studies*. 12(2): 273-281. DOI: 10.36941/ajis-2023-0048

Uteuliyev et al., 2023 – *Uteuliyev, N., Madiyarov, N., Drobyshev, Y., Azhibekov, K.* (2023). Assessment of the readiness of future mathematics teachers to use digital educational resources in the study of geometry in Kazakh Universities. *European Journal of Contemporary Education*. 12(2): 667-677. DOI: 10.13187/ejced.2023.2.667

Vdovina et al., 2021 – *Vdovina, M., Firsov, M., Karpunina, A., Sizikova, V., Bogatov, D.* (2021). The impact of digitalization on social and pedagogical work development. *Nuances: Estudos Sobre Educação*. 32(00): e021021. DOI: 10.32930/nuances.v32i00.9209

Wagner et al., 2023 – *Wagner, M.-N., Kupriyanova, M., Maximova, O., Ovezova, U.* (2023). Development of a methodology for improving the efficiency of teaching written translation of business correspondence (WTBC) for economics students. *Perspectives of Science and Education*. 63(3): 130-144. DOI: 10.32744/pse.2023.3.8

Yumashev et al., 2021 – *Yumashev, A., Kozlovskaya, S., Grishaeva, K., Karapetyan, A.* (2021). The use of digital technologies for teaching dentistry. *International Journal of Emerging Technologies in Learning*. 16(8): 270-278. DOI: 10.3991/ijet.v16i08.19217