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Monitoring the Effectiveness of the Model for the Formation of Network Communication Culture and Digital Etiquette Teachers and Students in the Online Community of the University

Abstract

Introduction. The article presents the results of a study aimed at monitoring the effectiveness of a model for developing networked communicative culture and digital etiquette among university faculty and students in a digital environment. The theoretical foundation of the work is based on the integration of socio-psychological, activity-based, and learner-centered approaches, as well as the cultural-historical paradigm of digital interaction. *Methodology and Methods.* The monitoring system included criteria for assessing the communicative, cognitive, and value-motivational components of networked communicative culture (NCC) and digital etiquette, as well as indicators of their practical implementation in educational and professional online communication. The research methodology combined psychological training scenarios, diagnostic tools, and case analysis, which made it possible to identify the levels of formation of NCC and digital etiquette. *Results.* The findings confirm the effectiveness of the proposed model in fostering responsible digital behavior, enhancing online collaboration skills, and strengthening academic communicative culture. The practice-oriented nature of the results allows the developed model to be applied in designing educational strategies and shaping the digital policy of universities. *Scientific novelty.* The introduction of a monitoring system makes it possible to diagnose the levels of development of NCC and digital etiquette among different participant groups (faculty and students), taking into account their professional and personal characteristics. *Practical significance.* The practical significance of the study lies in the possibility of applying its results in the design of educational strategies and university digital policies aimed at improving the quality of virtual academic interaction.

Keywords: networked communicative culture, digital etiquette, monitoring, innovative model, online community, customization, higher education.

Introduction. The modern system of higher education is developing under the conditions of digital transformation, where online communication between faculty and students plays a key role. Virtual learning environments, immersive technologies, electronic communities, and social networks are becoming not only tools for acquiring knowledge but also spaces for professional and interpersonal communication. At the same time, the quality and productivity of digital interaction largely depend on the level of development of networked communicative culture (NCC) and digital etiquette (DE) among participants in the educational process.

The lack of well-developed NCC and DE skills leads to communication barriers, increased conflict, a decline in academic ethics, and distortion of the educational process. An important task, therefore, is not only the formation of NCC and DE but also the creation of an effective monitoring system that makes it possible to track the dynamics of their development, diagnose problem areas, and adjust educational strategies. Monitoring the effectiveness of such models becomes particularly significant as it ensures: evaluation of the real outcomes of educational innovations; identification of the level of readiness of faculty

and students for networked communicative behavior; improvement of academic communication quality and digital etiquette; and the formation of a sustainable networked communicative culture of interaction within the university's online community.

The relevance of the study is determined by the need to monitor the innovative model developed and tested by U.M. Abdigapbarova and A.E. Berikhanova, entitled «Formation of Networked Communicative Culture and Digital Etiquette among Faculty and Students within the University's Online Community». This model enables a systematic assessment and improvement of the process of developing networked communicative culture (NCC) and digital etiquette (DE) among participants in the educational process of a modern university.

A significant body of pedagogical research emphasizes that the formation of NCC and DE should be accompanied by the creation of an effective monitoring system that ensures the tracking of competence development dynamics, identification of problem areas, and adjustment of educational strategies. For example, Srebryakova (2012) proposed a conceptual-hermeneutic approach to monitoring students' communicative competence, highlighting the need to combine psychological and practice-oriented foundations. Similarly, N.V. Shumina (2021), in her study of soft skills development in the digital environment, justified the feasibility of implementing online monitoring based on interactive technologies (case studies, WebQuest, role-playing games) and confirmed their effectiveness through statistical analysis.

Unlike existing approaches (Srebryakova, 2012; Shumina, 2021), the proposed model takes into account the specifics of the Kazakhstani digital educational environment and relies on the research of domestic scholars (Abdigapbarova et al., 2024; Antonceva et al., 2024). This enables the integration of international experience with the national context, ensuring that the monitoring process is adapted to the peculiarities of communication between faculty and students within university online communities.

Studies by Imangalieva and Samalbek (2021) indicate that communicative competences in the educational environment directly depend on the use of digital technologies and should be accompanied by systematic evaluation of their effectiveness. Recent scholarly publications (Siddiq, Hatlevik, Olsen, Throndsen, & Scherer, 2016) demonstrate that the digitalization of higher education brings the issue of quality and productivity of communication within university online communities to the forefront. The authors emphasize that effective interaction in a digital environment becomes a key factor in shaping the networked communicative culture of educational process participants.

A body of empirical and theoretical research (Darius, Gundabattini, & Solomon, 2021; Adedoyin & Soykan, 2023) confirms that digital technologies, amid the rapid transformation of education, are becoming a fundamental tool for organizing the learning process and maintaining communication between its key stakeholders - faculty and students. They create new opportunities for interactive engagement and cooperative problem-solving. As Müller and Mildenberger (2021) show, the transformation of university education today is associated with the transition from traditional approaches to personalized learning strategies, the use of digital technologies, and the development of online interactions.

Thus, the digital environment of a university is gradually transforming into a platform for building sustainable academic online communities, where learning and communication processes mutually reinforce each other. At the same time, the effectiveness of digital technology use is directly linked to the development of networked communicative culture (NCC) and adherence to digital etiquette norms, as these elements ensure constructiveness, respectfulness, and productivity in virtual interactions. In this context, the digitalization of education is considered not only as a technical process but also as a psychological phenomenon that influences value orientations and behavioral norms of participants in the educational process.

Despite a significant body of research, there remains an evident lack of targeted studies focused on monitoring the effectiveness of NCC and digital etiquette formation. Existing studies

tend to emphasize general aspects of digital competence, isolated elements of network interaction, or specific pedagogical practices (Imangalieva & Samalbek, 2021; Anton'tseva & Kudysheva, 2024). However, the issue of developing a comprehensive monitoring system capable of tracking the dynamics of NCC and DE development among faculty and students in a university online environment remains underexplored.

To ensure the consistency and logical structure of the monitoring process, this study proposes an original innovative model for the formation of networked communicative culture (NCC) and digital etiquette (DE), developed by U.M. Abdigapbarova and A.E. Berikhanova (Figure 1).

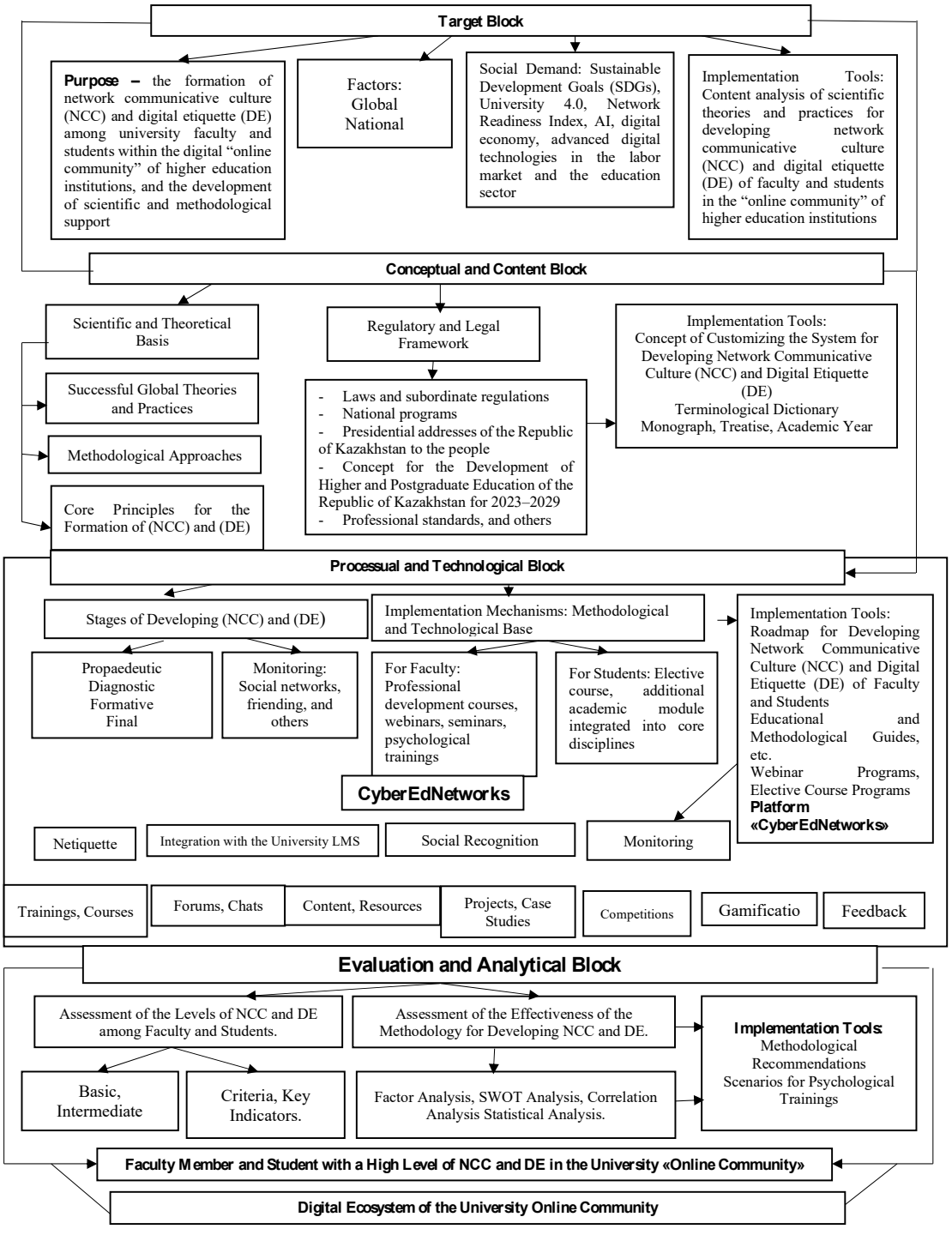

Figure 1: Innovative Model for the Formation of Networked Communicative Culture and Digital Etiquette among Faculty and Students within the University's Online Community

In accordance with the purpose of this article, our objective is to monitor the effectiveness of the model for forming networked communicative culture (NCC) and digital etiquette (DE) among faculty and students within the university's online community.

This model reflects the integration of pedagogical and psychological approaches, enabling systematic observation of the dynamics of NCC and DE development among faculty and students. Unlike existing approaches presented in international research (Siddiq et al., 2016; Adedoyin & Soykan, 2023), the proposed model is oriented toward the Kazakhstani educational context and takes into account the specific features of university online communities.

Materials and Methods. The study was conducted at Abai Kazakh National Pedagogical University. The sample consisted of a general population of 300 students from the Faculty of Pedagogy and Psychology, with the participation of 40 faculty members.

Table 1. *Monitoring Tools*

Methodology	Purpose of Application	Measured Indicators	Authors / Sources
Questionnaire on Network Communicative Culture (modified DCC)	Identification of the level of formation of Network Communicative Culture.	Frequency, quality, forms of communication	Hatlevik et al. (2015)
Diagnosis of Communicative Tolerance	Assessment of the ability for appropriate communication in the online environment	Tolerance, acceptance, and respect	V.V. Boyko
Methodology «Communicative Attitudes»	Determination of value orientations and personal attitudes	Value orientations, cooperation-oriented attitudes	M. Rokeach (adapted by Kazakhstani authors)
Digital Etiquette Questionnaire (Adaptation)	Study of knowledge and compliance with digital etiquette norms	Knowledge of digital etiquette rules, frequency of violations, adherence to norms	Tapalova (2024)
Case Method (situational tasks)	Assessment of the ability to apply network communicative culture (NCC) and digital etiquette (DE) in real situations	Correctness of chosen behavioral strategies, ethical level of decisions	Artamonova (2019), e-learning practices
Expert Assessment of Behavior in the online-community	Evaluation of participants' adherence to digital etiquette (DE) and network communicative culture (NCC) norms by moderators	% Percentage of correct and incorrect communications	L.M. Mitina, (2018)
Content Analysis of Digital Activity.	Examination of communication style and quality in LMS, chats, and forums	Speech practices, frequency of conflicts, adherence to digital etiquette norms	Krippendorff (2013) adapted
E-portfolio (Digital Portfolio)	Cumulative recording of the development of network communicative culture (NCC) and digital etiquette (DE) among participants	Projects, reflection, teamwork, online initiatives.	Tapalova (2024)

Longitudinal-study (slices)	Monitoring the dynamics of changes over the course of a semester (year)	Entry – intermediate – final indicators	Creswell J. (2014)

The monitoring system integrates psychological methods (questionnaires, tests, case studies) and digital analytics (content analysis, LMS data, e-portfolio).

Stages of monitoring the effectiveness of the model for developing NCC and DE among faculty and students within the university's online community:

1. Diagnostic Stage (Initial Assessment).

Purpose: To determine the initial level of networked communicative culture (NCC) and digital etiquette (DE).

Methods: Questionnaire on communicative culture (Hatlevik et al., 2015); Communicative Tolerance' Test (V.V. Boyko); Digital Etiquette Questionnaire (adapted from ISTE, 2017).

Outcome: Baseline level map (low / medium / high).

2. Formative Stage (Ongoing Monitoring).

Purpose: To track the dynamics of changes during the implementation of the model.

Methods: Case method (analysis of situations related to NCC and DE); Expert assessments (observation of online communication in LMS and chats); Sociometry (structure of network interactions).

Outcome: Identification of 'problem areas' (conflict tendencies, low level of etiquette, weak communication).

3. Interpretative-Corrective Stage (Feedback).

Purpose: To identify the causes of violations and deviations and make adjustments to the model.

Methods: Content analysis of online communications (Krippendorff, 2013); SWOT analysis of digital culture (adapted for university context); Reflective questionnaires for students and faculty.

Outcome: Recommendations for adjusting educational strategies.

4. Final Stage (Outcome Assessment).

Purpose: To evaluate the effectiveness of the implemented NCC and DE model.

Methods: Repeated questionnaires and tests (comparison with initial baseline levels); E-portfolio (assessment of accumulated digital practices and projects); Longitudinal study (comparison of dynamics over a semester/year).

Outcome: Individual and group development trajectories; statistical analysis of improvements in NCC and DE levels; conclusions on model effectiveness.

5. Presentation and Prognostic Stage (Meta-Stage).

Purpose: Dissemination of results and forecasting further development.

Methods: Presentation of findings at conferences and in publications.

Outcome: Scalable monitoring system, recommendations for other universities.

In the context of expanding the empirical toolkit and verifying the obtained research results, an analysis was conducted in the format of focus groups that included representatives of both participant categories (faculty members and students). The use of this instrument made it possible to obtain an in-depth understanding of the experience of interaction among subjects of the educational process within the digital environment of the university. Focus groups were regarded as an effective method for identifying common perspectives and representative positions of participants, as well as a tool for diagnosing key problems and current needs related to the formation of networked communicative culture and digital etiquette. During the discussions, open-ended and semi-structured questions were applied, which facilitated the expression of personal judgments and value orientations, as well as the free exchange of ideas and positions, ensuring the collection of spontaneous and in-depth responses. The primary purpose of conducting focus groups was to identify the specific characteristics of communicative interaction between faculty members and students within the university «on-line community» and to determine directions for its optimization.

In order to ensure the objectivity and representativeness of the empirical data, the

following measurement instruments were applied: the scale of networked communicative culture and digital etiquette, and the digital etiquette skills scale, the statistical verification of which confirmed a high degree of reliability (Cronbach's $\alpha = 0.889$) and satisfactory construct validity (KMO = 0.858). Although in the study by Zheng, Li, Ding, and Huang (2023) this instrument was used primarily for the diagnosis of students, its adaptation proved to be relevant for assessing the digital ethics of faculty members as well.

The collected data were systematized and incorporated into a unified database reflecting the initial level of development of networked communicative culture and digital etiquette among both groups of respondents.

Results and Discussion. The results of the experimental study demonstrate the effectiveness of the innovative model developed by U.M. Abdigapbarova and A.E. Berikhanova in terms of the development of networked communicative culture and digital etiquette among undergraduate and graduate students.

Statistical analysis revealed that students improved their networked communicative culture skills to 58.544 out of 65 possible points, which is supported by a high level of statistical significance ($p = 0.002$, at $p \leq 0.05$). With respect to digital etiquette, statistical significance was also high, remaining within the established threshold ($p = 0.004$, at $p \leq 0.05$). In terms of the observed relationships between digital competencies and the academic performance parameters of respondents, no strong correlation was identified. This may indicate that the effectiveness of the model does not depend on students' academic grades, making it equally applicable for students with both high and low academic performance. The establishment of a comprehensive monitoring system that integrates diagnostic, formative, and interpretative-prognostic stages ensures the timely adjustment of educational strategies and contributes to enhancing the quality of digital interaction among the participants in the educational process.

Table 2 illustrates a comprehensive approach to assessing the effectiveness of the model for developing networked communicative culture (NCC) and digital etiquette (DE) among students within the university's online community.

Its structure is based on four key criteria: cognitive, value-motivational, behavioral, and reflective. Each criterion is aligned with corresponding indicators, diagnostic methods, and quantitative measures, which makes it possible not only to record the level of development of individual components but also to identify the dynamics of their progression.

1. The cognitive criterion reflects the level of students' knowledge regarding the norms of online communication and the rules of digital etiquette. Test results indicate the distribution of students across levels ranging from low (<60%) to high (>90%), which enables the assessment of the effectiveness of educational activities aimed at enhancing digital literacy.

2. The value-motivational criterion captures the importance students attribute to digital etiquette and online communication culture. Questionnaire results revealed three levels of motivation (low, medium, high), demonstrating the readiness of a portion of students to integrate digital etiquette norms into their own online behavior.

3. The behavioral criterion reflects the actual skills of applying digital communication norms in practice: participation in discussions, communication correctness, and adherence to interaction rules. Content analysis and observation identified the percentage of students demonstrating high, medium, and low levels of online communication culture.

4. The reflective criterion assesses students' ability for self-analysis and awareness of their digital behavior. Survey data showed that a significant portion of students have a medium level of reflection, indicating the need for further development of this component through training sessions and case-based discussions.

Table 2 provides a systematic and holistic understanding of the level of formation of students' network communicative culture (NCC) and digital etiquette (DE). It enables the identification of not only strengths but also problematic areas requiring methodological and organizational interventions, as well as the development of individual and group trajectories for the advancement of digital culture.

Table 2. *Comparative Characteristics of the Level of Formation of NCC and DE Among Students*

Level of Network Communicative Culture and Digital Etiquette	Less than 60	60-75	75-90	90+
	86	69	50	83
	107		100	
Undergraduate				
Level of Network Communicative Culture and Digital Etiquette				
Master's Program	52			48
Knowledge of digital etiquette rules and network communicative culture terminology.	35		265	
Motivation to adhere to online communication norms, significance of digital etiquette.	200		100	
Ability for self-analysis, awareness of digital identity.	85		125	

The results of the statistical analysis demonstrated a significant increase in the level of network communicative culture among students: the average score reached 58.54 points out of a possible 65, which is confirmed by a high degree of statistical significance ($p = 0.002$ at a threshold level of $p \leq 0.05$). With regard to digital etiquette, a statistically significant positive dynamic was also observed ($p = 0.004$ at $p \leq 0.05$), indicating the positive impact of the developed model on the formation of this competence. At the same time, a correlation analysis of the relationship between the level of digital competencies and students' ability for self-analysis and awareness of digital identity did not reveal a pronounced dependence. This result can be interpreted as evidence of the universal nature of the effectiveness of the proposed model, which demonstrates a positive impact regardless of the learners' level of awareness.

The empirical results reflecting the level of knowledge of digital etiquette rules and network communicative culture (NCC) terminology demonstrated that only about half of the students (48 respondents, <60%) had insufficient awareness, whereas a significant portion of respondents showed an above-average level (75–90% – 103 respondents, >90% – 112 respondents). This distribution indicates the presence of unevenness in the cognitive component of NCC. According to the studies of V. P. Sergeeva (2019) and A. E. Voiskunsky (2020), the cognitive component serves as the foundation for the formation of conscious digital identity, as knowledge of norms and terminology provides the basis for their subsequent internalization in communicative practice.

The data obtained for the motivational block (high motivation – 63 respondents, medium – 200 respondents, low – 37 respondents) show that the majority of students recognize the importance of digital etiquette and generally demonstrate a positive attitude toward adhering to it. These results align with the conclusions of L. S. Podymova (2018), who argues that the motivational-value component is a key condition for developing responsibility in the digital environment.

The indicators of communication culture level (high – 93 respondents, medium – 167 respondents, low – 40 respondents) suggest that about half of the respondents require targeted correction of communicative strategies, particularly in terms of constructive conflict resolution and the prevention of deviant forms of behavior in online interaction. In this context, the position of E. Sh. Yamburg (1997) is confirmed regarding the importance of combining cognitive and affective components in the formation of communicative culture.

Special attention should be paid to the data on the level of reflection and awareness of digital identity (high level – 96 respondents, medium – 134 respondents, low – 70 respondents). These results indicate that a significant proportion of students exhibit only a partial development of the ability for self-analysis in the digital environment. In accordance with L. S. Vygotsky's cultural-historical theory (1982), reflection ensures the internal regulation of behavior and shapes an individual's readiness for the responsible use of digital technologies.

Thus, the analysis of the obtained data allows us to conclude that the cognitive and motivational-value components of network communicative culture (NCC) among students are generally at a sufficiently high level; however, the communicative-behavioral and reflective aspects require targeted pedagogical support. This substantiates the relevance of implementing comprehensive monitoring of effectiveness and introducing an original model for the formation of NCC and digital etiquette in the university online environment.

According to 81% of teachers, this model makes it possible to effectively organize the process of developing network communicative culture and digital etiquette among students, providing new opportunities for the use of digital tools (webinars, online tests, and the possibility of a personalized approach to each student).

However, 19% of teachers expressed dissatisfaction with the use of digital tools due to the inefficiency of online formats for presenting complex content, difficulties in solving technical issues, and ensuring the active participation of all students. For some teachers, this required additional preparation for mastering new technologies, which posed particular challenges.

Table 3. *Evaluation by Teachers of the Effectiveness of the Model for the Formation of Network Communicative Culture and Digital Etiquette*

Opinion of Instructors	%	Number of respondents (if N = 100)	Characteristic
Positive Evaluation of Model Implementation	81%	81	Effective organization of the process of developing network communicative culture (NCC) and digital etiquette (DE); new opportunities for the use of digital tools (webinars, online tests, personalized approach to students).
Negative Evaluation of Model Implementation	19%	19	Challenges in using digital tools (limitations of online formats for complex content; technical issues; difficulties in engaging all students; the need for additional teacher training).

The evaluation of the effectiveness of the tested innovative model by U.M. Abdigapbarova and A.E. Berikhanova for the formation of network communicative culture and digital etiquette among teachers and students showed that the success of its implementation largely depends on comprehensive support from the digital educational environment. Comparative analysis of research demonstrates that in the absence of institutional support (in the form of professional development courses, methodological seminars, and training sessions), the use of digital tools is often limited to formal practices and does not ensure significant growth of digital competencies (Müller & Mildenberger, 2021; Adedoyin & Soykan, 2023). At the same time, the results of the approbation confirm the conclusions of authors emphasizing the importance of independent activity of learners and educators. Spontaneous mastery of digital technologies, reliance on individual initiative, and the search for alternative solutions contribute to the development of autonomy and flexibility, which positively affects the assimilation of norms of network communicative culture and digital etiquette (Siddiq et al., 2016).

Thus, the approbation of the model revealed that its effectiveness is determined by the combination of two factors: systematic institutional support and the stimulation of independent activity of participants in the educational process. Such a combination ensures a balance between standardized guidance and an individualized trajectory for the development of digital competencies, which makes it possible to achieve sustainable results both at the level of academic performance and at the level of communicative culture.

Conclusion. Monitoring the effectiveness of the authors' innovative model for developing network communicative culture (NCC) and digital etiquette (DE) within the university «online community» confirmed its productivity and feasibility for integration into the modern education system. The dynamic nature of the model lies in its non-static design; it functions as an adaptive mechanism that accommodates changes in the digital educational environment and the transformation of communicative practices among students and faculty. The methodological emphasis on integrating NCC and DE through educational and technological solutions ensures a comprehensive approach: from fostering foundational knowledge and values to consolidating sustainable communicative and ethical norms in online interactions. The key stages of monitoring represent logically consistent benchmarks that structure the process of developing digital competencies, thereby enhancing the manageability and predictability of educational outcomes.

Systematic monitoring of online behavior (participation in online courses, discussion forums, social networks, and digital activity analytics) demonstrates that digital culture and ethics are most successfully formed within a practice-oriented approach, where the educational environment becomes a space for the real application of competencies. The methodological and technological foundation of the model (professional development courses, webinars, seminars, psychological trainings, elective courses, and modules integrated into core disciplines) confirms the importance of comprehensive support for the educational process, ensuring the sustainable development of digital competencies and communicative culture. The findings have both theoretical and practical significance. Theoretically, they expand the understanding of mechanisms for forming digital communicative culture and digital etiquette under the conditions of educational digitalization. Practically, the results can be integrated into the psychological and pedagogical training of students and the professional development of university faculty, as well as used in the design of digital transformation strategies for higher education institutions. Thus, the tested model serves as an instrument for optimizing educational activities, ensuring a balance between technical, communicative, and ethical aspects of digital interaction, which makes it highly promising for implementation in the practice of Kazakhstani universities.

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References

Abdigapbarova, U. M., Isabayeva, D. N., Kasymova, D. T., & Imankulova, M. A. (2024). Monitoring students' activity in social networks: A key to network communicative culture and digital etiquette [Monitoring students' activity in social networks: A key to network communicative culture and digital etiquette]. Vestnik KazNPU imeni Abaya. Seriia: Pedagogicheskie nauki - Bulletin of Abai KazNPU. Series: Pedagogical Sciences, 81(1), 187–201. https://doi.org/10.51889/2959-5762.2024.81.1.017 [in Russian].

Adedoyin, O. B., & Soykan, E. (2023). Online learning: The challenges and opportunities. Interactive Learning Environments, 31(2), 863–875.

Anton'tseva, D. A., & Kudysheva, A. A. (2024). Razvitiye inoyazychnoy kommunikativnoy kompetentsii studentov estestvenno-nauchnykh distsiplin v usloviyakh tsifrovizatsii [Development of foreign language communicative competence of students in natural science disciplines during digitalization]. Izvestiya. Seriia: Pedagogicheskie nauki, 73(2) [in Russian].

Artamonova, E. P. (2004). Formirovaniye inoyazychnoy kommunikativnoy kompetentsii budushchikh uchiteley na osnove sotsiokul'turnogo podkhoda [Formation of foreign-language communicative competence of future teachers based on the sociocultural approach]. (abstract of the dissertation ... candidate of Pedagogical Sciences). Magnitogorsk [in Russian].

Boyko, V. V. (1996). Energiya emotsiy v obshchenii: vzglyad na sebya i drugikh [The energy of emotions in communication: looking at yourself and others]. Moscow: Filin [in Russian].

Hatlevik, O. E., Throndsen, I., Loi, M., & Gudmundsdottir, G. B. (2015). Students' ICT self-efficacy and computer and information literacy: Determinants and relationships. Computers & Education, 81, 35–47. https://doi.org/10.1016/j.compedu.2014.09.008

Imangalieva, M., & Samalbek, A. (2021). Formirovaniye kommunikativnoy kompetentsii studentov pedagogicheskogo universiteta [Formation of communicative competence of students of a pedagogical university]. Izvestiya. Seriia: Pedagogicheskie nauki - News. Series: Pedagogical Sciences, 63(4) [in Russian].

Krippendorff, K. (2013). Content analysis: An introduction to its methodology (3rd ed.). Thousand Oaks, CA: Sage.

Mitina, L. M. (2018). Lichnostno-professional'noye razvitiye uchitelya: strategii, resursy, riski [Personal and professional development of a teacher: strategies, resources, risks]. Moscow: Nestor-History [in Russian].

Müller, C., & Mildenberger, T. (2021). Facilitating flexible learning by replacing classroom time with an online learning environment: A systematic review of blended learning in higher education. Educational Research Review, 34(2021), 1-16. https://doi.org/10.1016/j.edurev.2021.100394

Podymova, L. S. (2018). Pedagogicheskaya podderzhka lichnosti v kontekste tsifrovizatsii obrazovaniya [Pedagogical support of the individual in the context of digitalization of education]. Obrazovaniye i nauka - Education and Science, 20(9), 85-102. https://doi.org/10.17853/1994-5639-2018-9-85-102 [in Russian].

Sergeeva, V. P. (2019). Sovremennyye podkhody k formirovaniyu tsifrovoy obrazovatel'noy sredy universiteta [Modern approaches to the formation of the digital educational environment of the university]. Vyssheye obrazovaniye v Rossii - Higher Education in Russia, 28(6), 34-42. https://doi.org/10.31992/0869-3617-2019-28-6-34-42 [in Russian].

Shumina, N. V. (2021). Soft skills development during foreign language learning: Online monitoring system. In Proceedings of the 2021 12th International Conference on e-Education, e-Business, e-Management, and e-Learning (IC4E 2021) (pp. 245–250). ACM. https://doi.org/10.1145/3446434.3446551

Siddiq, F., Hatlevik, O. E., Olsen, R. V., Throndsen, I., & Scherer, R. (2016). Taking a future perspective by learning from the past – A systematic review of assessment instruments that aim to measure primary and secondary school students' ICT literacy. Educational Research Review, 19, 58–84. https://doi.org/10.1016/j.edurev.2016.05.002

Srebryakova, N. V. (2012). Kontseptual'no-germenevticheskiy podkhod k monitoringu kommunikativnoy kompetentsii studentov [Conceptual and hermeneutical approach to monitoring students' communicative competence]. Istoricheskaya i sotsial'no-obrazovatel'naya mysl' - Historical and Social-Educational Thought, 4(19), 152–157 [in Russian].

STE Standards for Educators. (2017). International Society for Technology in Education. Retrieved from https://iste.org/standards

Tapalova, O., Abdigapbarova, U. M., Abildayeva, G., Baisultanova, S., & Nisanbaeva, S. (2024). Psikhologicheskiye osobennosti vliyaniya tsifrovogo obucheniya na sotsio-kommunikativnuyu kul'turu i kompetentnost' pedagoga i obuchayushchegosya [Psychological characteristics of the influence of digital learning on the socio-communicative culture and competence of teachers and students]. Vestnik KazNPU imeni Abaya. Seriya «Psikhologiya» - Bulletin of Abai KazNPU. Series "Psychology", 78 (1), 1-12. https://doi.org/10.51889/2959-5967.2024.78.1.024 [in Russian].

Voiskunsky, A. E. (2020). Kiberpsikkhologiya: vozniknoveniye novogo napravleniya [Cyberpsychology: the emergence of a new direction]. Psikhologicheskiye issledovaniya - Psychological Research, 13(70), 1-10. https://doi.org/10.31857/S207987840009055-3 [in Russian].

Vygotsky, L. S. (1982). Sobraniye sochineniy: V 6 tomakh Tom 1. Voprosy teorii i istorii psikhologii [Collected works: In 6 volumes Vol. 1. Questions of theory and history of psychology]. Moscow: Pedagogika Publ. [in Russian].

Yamburg, E. S. (1997). Shkola dlya vsekh. Individualizatsiya obrazovatel'nogo protsessa kak sredstvo gumanizatsii obrazovaniya [A school for everyone. Individualization of the educational process as a means of humanizing education]. Moscow: New School [in Russian].

Zheng, Y., Li, R., Ding, J., & Huang, J. (2023). Effects of digital game-based learning on students' digital etiquette literacy, learning motivations, and engagement. Heliyon, 9(2), e23490. https://doi.org/10.1016/j.heliyon.2023.e23490

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