

S.A. SADYKOVA¹, B.T. KERIMBAYEVA¹✉, Y.R. KERIMBEKOV²¹K. Zhubanov Aktobe Regional University²South Kazakhstan Pedagogical University named after O. Zhanibekov

✉e-mail: bkerimbayeva@zhubanov.edu.kz

THEORETICAL FOUNDATIONS AND CRITICAL ANALYSIS OF LECTURE-BASED TEACHING METHODS IN THE CONTEXT OF CYBERCOMMUNICATIVE ADDICTION PREVENTION

Abstract. The article presents the results of a methodological study focused on systematizing lecture-based and practical teaching methods for the prevention of cyber-communication addiction among students of higher education institutions. Our research methodology is based on a systematic analysis and overview of classic educational theories (such as constructivism, social learning theory, and self-determination theory), a critical review of recent research on digital addiction (2010–2025), as well as the design of an integrated theoretical model. A justification is provided for the effectiveness of traditional lectures in behavioral change; suitable lecture formats (problem-based, visualized, dialogic, and expert-led) identified and structured; required practical methods (case studies, role-playing, self-regulation training, and project-based tasks) are identified; an integrated pedagogical model for the prevention of cyber-communication dependence (IPM-CCDP), including cognitive, behavioral, reflective, and project-based components, is designed based on this review. In the context of the digital transformation of education, the problem of cyber-communication addiction requires a comprehensive pedagogical approach that combines traditional teaching formats with interactive, practice-oriented methods. This study shows effective cybercommunication addiction prevention requires transformation of the student's role from a passive recipient of information to an active participant responsible for their own digital well-being. The novelty of the study is the systematic integration of pedagogical methods and their theoretical foundations by combining classical pedagogical theories with Griffiths's additive model of addiction.

Keywords: cybercommunicative addiction, prevention, teaching methods, lecture formats, digital hygiene, self-regulation, integrated pedagogical model.

Introduction

Digitization of all spheres of life has made information and communication more accessible than ever before. Along with the obvious advantages, however, digital technologies have given rise to new forms of addictive behavior, among which cyber-communication addiction plays a special role – a persistent need for constant online presence and interaction that affects a person's daily life [1; 2]. This problem is particularly important among higher education students, whose reliance on

* Бізге дұрыс сілтеме жасаңыз:

Sadykova S.A., Kerimbayeva B.T., Kerimbekov Y.R. Theoretical Foundations and Critical Analysis of Lecture-Based Teaching Methods in the Context of Cybercommunicative Addiction Prevention // Yassawi Journal of Education Studies. – 2026. – №2 (140). – Б. 122-135. <https://doi.org/10.47526/3107-3123.102>

*Cite us correctly:

Sadykova S.A., Kerimbayeva B.T., Kerimbekov Y.R. Theoretical Foundations and Critical Analysis of Lecture-Based Teaching Methods in the Context of Cybercommunicative Addiction Prevention // Yassawi Journal of Education Studies. – 2026. – №2 (140). – Б. 122-135. <https://doi.org/10.47526/3107-3123.102>

Date of receipt of the article 15.09.2025 / Date of acceptance 30.06.2026

digital tools for both academic and personal purposes creates a risk that their academic dependence may develop into behavioral addiction.

A meta-analysis of studies shows that the prevalence of internet addiction among students in different countries ranges from 6% to 30%, based on the diagnostic criteria and cultural context used. Based on data from Kariev et al., 81.79% of students in Kazakhstan demonstrate signs indicating that they are at risk or are already addicted [3]. These circumstances represent a significant challenge for the higher education system, which requires not only imparting knowledge but also teaching students the competencies to engage effectively with the virtual community. Despite the fact that traditional lectures remain at the core of teaching in higher education institutions, the effectiveness of this approach in addressing behavioral change is limited. Consequently, as noted by Biggs [4] and Ramsden [5], lectures are efficient ways to transfer information but inefficient for skill development and behavioral change. Therefore, there is a need to re-evaluate lecture-based methods and integrate them with active, interactive, and practice-oriented forms of instruction.

There are three main factors that make this research so important:

- 1) cybercommunication addiction is widespread among college students;
- 2) methods for preventing it in higher education haven't been fully developed;
- 3) education needs to include methods designed for the digital generation.

The purpose of this article is to present a theoretically grounded analysis of lecture-based and practical teaching methods aimed at preventing cyber-communication addiction and to offer an integrated model of pedagogical intervention based on a combination of classical pedagogical theories and modern research on digital addiction.

Research Objectives: 1. To classify the fundamental theories of cyber-communication addiction in the context of higher education. 2. To critically analyze current teaching methods-both theoretical and practical-as they may be applied to addiction prevention. 3. To design an integrated pedagogical model for the prevention of cyber-communication addiction (IPM-CCDP). 4. To identify directions for further research.

Our research hypothesis assumes that the integrated use of problem-oriented, visual, and dialogic lecture formats, combined with practical methods (case studies, role-playing, self-regulation training, and project-based tasks), will create an effective system for preventing cyber-communication addiction. These methods, combining classical pedagogical theories with a modern component model of addiction, are expected to transform the student's role from that of a passive recipient of information into that of an active agent responsible for their own digital well-being.

This study's novelty does not lie in the methods themselves (problem-based learning, case studies, role-playing games, and similar approaches well-known in education) as much as in their systematic application to address the specific challenge of preventing cyber-communication addiction as part of a theoretical framework that combines traditional pedagogical theories (constructivist learning theory [6; 7]; Bandura's social learning theory [8]; Deci and Ryan's self-determination theory [9]) and Griffiths's component model of addiction.

Research methods and materials

This study is presented in the form of a theoretical-methodological (conceptual) article. As this study is not empirical, there was no need to collect primary data, form a sample, or apply statistical methods. The research design includes three main stages: (1) a systematic analysis and synthesis of classical pedagogical theories relevant to the prevention of addictive behavior; (2) a critical review of contemporary research on digital addiction and educational interventions; (3) the development of an integrated theoretical model based on the synthesis of the results of the first two stages.

This study is grounded in four classical theories:

First, the constructivist theory of learning (Piaget; Vygotsky). Based on this theory, students actively construct their knowledge through interaction with their social and physical environments. From the perspective of preventing cyber-addiction, this means that students must not merely absorb

information about the dangers of addiction; they must actively reflect on it, connect it to their own experiences, and develop individual strategies to promote healthy cyber habits.

Second is Bandura's social learning theory. Observing, modeling, and self-efficacy are the key ideas in this theory. Based on Bandura's work, people learn new kinds of behavior by observing and following others. Healthy digital behavior models demonstrated by teachers, experts, and peer groups play an important role in the context of prevention.

Third is the self-determination theory by Deci and Ryan. This theory states that the three basic psychological necessities of autonomy, competence, and belonging are essential for intrinsic motivation and lasting behavioral change. From a prevention perspective, this means that educational activities have to support students' autonomy, build their competence, and help them feel a part of the community.

The fourth theory is Griffiths' component model of addiction. According to this model, addiction is characterized by six key components: salience (dominance in consciousness), mood modification, tolerance, withdrawal, conflict, and recidivism. Understanding these components makes it possible to develop preventive interventions.

As this work is a theoretical and methodological article, no primary empirical data were collected. The following methods were, however, used as a basis for the proposed model:

1.Theoretical analysis—a study of traditional and modern pedagogical and psychological theories and concepts of digital addiction.

2.Synthesis—combining theories from different academic fields to design a model for prevention.

3.Model development—designing a structurally-functional model of IPM-CCDP that reflects the interactions between theoretical foundations, components, and expected outcomes.

4.Comparative analysis — comparing the suggested model and existing approaches to the prevention of internet addiction.

Results and discussion

Cyber-Communication Addiction as an Educational Problem

Cyber-communication addiction is defined as a form of behavioral addiction characterized by a loss of control over the use of digital communication technologies, increased tolerance, withdrawal symptoms, intrapersonal and interpersonal conflicts, as well as relapses [10].

From an educational perspective, cyber-communication addiction represents a complex interdisciplinary problem requiring not only psychological but also educational intervention. The pedagogical approach focuses on primary prevention—the formation of knowledge, skills, and attitudes in students that prevent the development of addictive patterns [11; 12].

Authors Kerimbaeva, Kerimbekov, and Sapargalieva consider the development of a network communication culture among teachers to be a key competency for the prevention of cyber-communication addiction. The authors consider the formation of a teacher's network communication culture as a key competence for the prevention of cyber communicative addiction through education. The authors emphasize that the development of this culture includes not only technical skills but also psychological, emotional, and ethical aspects of communication in the digital environment, which is the theoretical foundation for the development of pedagogical prevention methods. The authors also note that the formation of a network communication culture for future teachers, including norms of network etiquette, skills of reflection, and conscious interaction in the digital environment, forms the basis for pedagogical prevention of destructive online habits [13, p. 288].

Lecture methods are focused on developing students' critical understanding of the mechanisms of cybercommunicative addiction, understanding its cognitive and behavioural consequences, and encouraging them to reflect on their own cybercommunicative practices. Kerimbaeva et al. point out that active teaching methods, such as training, case studies, and situation modeling, allow students to practice healthy digital interaction skills in practice, which forms the logical structure of the research for preventive lecture courses [14, p. 197].

Cognitive and Behavioral Mechanisms of Addiction

The synthesis of neurobiological and cognitive-behavioral research [15] suggests three levels of addiction mechanisms: (1) a key role of the dopamine reward system at the neurobiological level; (2) the phenomenon of “attention bias” and metacognitive control impairment at the cognitive level; and (3) the mechanisms, at the behavioral level, that form stable patterns of addictive behavior. These mechanisms are critical for educational design, as they allow for the focused development of compensatory self-regulation skills.

Lecture-based prevention methods

There are a few different lecture formats that have been suggested, as opposed to the traditional informational lecture, which is effective for conveying knowledge but not for changing behavior.

Problem-based lecture is based on the principles of problem-based learning by Dewey [16] and Barrows [17]. Compared to the traditional model of information transfer, this method places learning within the context of solving a real or realistic problem, which stimulates cognitive conflict and initiates active problem-solving processes. The effectiveness of the problem-based approach is confirmed by a meta-analysis by Strobel and van Barneveld, which showed that students who learned using PBL demonstrate better results in the development of problem-solving skills and self-regulated learning [18].

Problem lecture – Problem-based lectures deviate from the traditional model of information delivery by placing learning in the context of provocative, controversial, or complex issues. The use of this approach stimulates cognitive dissonance, initiating the processes of reflection and research, which contribute to deeper learning of the material. As an illustration, the beginning of the lecture with the question: “What are the causes of difficulties with concentration among modern students, despite their unlimited access to information resources?”, encourages students to rethink their own experiences and formed ideas. In the context of studying Internet addiction, problem-based learning promotes students' understanding of fundamental mechanisms such as attention bias and reward-based reinforcement that support maladaptive digital behavior.

Then the concept of the ‘attention economy’ is introduced, in which social networks are presented not as neutral platforms, but as aggressive competitors for our most valuable resource. This is a story about the culmination of collaborative research, as happens in neurobiology. The research that helps with this belongs to analyze active learning in the context of computer learning, drawing a parallel with human cognition: identifying and eliminating uncertainty is the key to deep understanding. In our case, this includes demonstrating how reinforcement mechanisms work. Means (dopamine traps) and attentive bias are deliberately created by digital products, making us “constantly distracted” rather than “informed”.

The following starting points for such a discussion may be equally effective: ‘Is it a myth that digital multitasking comes at a high cost?’ ‘Can ‘likes’ and ‘followers’ be considered a new currency that pays for self-esteem?’ When prioritizing problem solving over problem identification, teachers activate the process of critical thinking, without which it is impossible to achieve real, rather than formal, changes in behaviour.

Visualized lectures are based on Paivio’s dual-coding theory [19] and Mayer’s cognitive theory of multimedia learning [20]. According to these theories, information presented simultaneously in verbal and visual forms is processed through two relatively independently functioning cognitive channels, which contributes to a deeper understanding and better retention of the material. How to use it: to demonstrate the dynamic “habit chain” diagram (trigger → action → reward → investment), that shows the cycle of how addiction develops and works as a tool for students to reflect on their behavior.

Lecture-visualization – Visualization-based lectures are not merely effective but are also supported by more extensive pedagogical research in the field of active learning. As Prince notes in his comprehensive review, educational approaches that engage students in active learning, including

problem-based learning, collaborative tasks, and use of visual conceptual models, result in more in-depth understanding and learning compared to passive lecture formats. Visually representing concepts such as “dopamine loops” or “habit cycles” helps make abstract ideas into specific, actionable examples, making them easier to understand and think about.

In the context of cyber-communication addiction, a carefully designed visualization of the digital habit cycle (e.g., triggers → behavior → consequences → reinforcement) can serve as a powerful pedagogical tool. When students see and analyze such a model, their understanding of the dynamics of addiction is not merely explained to them; they actively develop an understanding of how digital platforms attract attention. As mentioned by Prince, active learning motivates students to move from passive observation to understanding and application. In this way, the visualization becomes a tool for critical thinking, which allows students to identify the digital addiction process and take the first step toward self-regulation [21].

Dialogic lectures, which include topics for discussions and reflection, allow for active engagement rather than a one-sided monologue. Per Vygotsky, learning takes place in a context of active social interaction, in which students learn to apply new ways of understanding through the support of the instructor and the group. The question “Have you seen these traits in yourself?” helps students shift from passive learning to collaborative understanding, helping them to reflect on their own experiences, breaking down negative perceptions of internet addiction, and developing critical digital literacy.

A lecture with a guest expert, from the perspective of Bandura’s social learning theory, provides a model of competent behavior. The expert serves as an authoritative model, demonstrating professional attitudes and problem-solving methods.

From the perspective of Bandura’s social learning theory, a guest expert lecture represents a model of competency. It is a demonstration of exemplary behavior, showcasing professional approaches and methods for solving problems.

The inclusion of guest experts - practicing psychologists, neuroscientists, digital ethics specialists, or individuals who have successfully undergone rehabilitation—adds an extremely valuable aspect of real-world relevance and practical significance to the learning process. Sessions like these effectively bridge the gap between the course’s theoretical concepts and real-life experiences, presenting students not only with scientifically grounded approaches but also with inspiring stories that appeal to their hearts.

Lectures with guest experts - involving practitioners in psychology, behavioral neuroscience, or digital ethics or those who have successfully completed rehabilitation - are beneficial. According to Bandura's social learning theory [8], experts serve as influential models of behavioral competence. Based on Knowles's approach to adult education [22], the expert’s personal and professional experience is considered a key learning resource for adult learners. The interaction with a “more knowledgeable other” creates a unique social context for development and provides students with a sense of belonging to a professional community and an opportunity to enhance their competence [9]. The adapted lecture methods of cybercommunication addiction prevention are presented in the following Table 1.

Table 1 – Adapted lecture methods of cybercommunication addiction prevention

Method	Theoretical Basis	Preventive Mechanism
1	2	3
Problematic lecture	Problem-based learning (Dewey, Barrows)	Cognitive conflict stimulation, reflection on personal experiences
Lecture - visualization	Dual coding (Paivio), multimedia learning (Meyer)	Visual models to show how addiction works

Continuation of Table 1

1	2	3
Lecture with elements of discussion (“Dialogue Lecture”)	Sociocultural theory (Vygotsky)	Personal experiences, building trust, and critical thinking
“Guest Lecture” or “Lecture with Experts” (online or offline)	Social learning (Bandura), adult education (Nouls)	Competent behavior, honesty, and trust

2. Methods for practical classes (active and interactive): Practical methods focus on translating theoretical knowledge into practical behavior and forming sustainable habits of self-regulation. The practical methods used in this study include the following specific types of activities: case analysis and development, role-playing, self-regulation training, and project-based activities. We evaluated the effectiveness of these methods through surveys, observation, self-assessment diaries, and screen time logs. These practical methods have the goal of changing theoretical understanding into sustainable skills and behavioral strategies. Here are some specific methods, how they work, and how they are thought to make a difference.

The case study method (analyzing real-life situations) is based on the principles of contextual learning. Participants analyze real or simulated situations, identify symptoms of addiction and possible causes, and suggest action plans. A study by Tislutait et al. confirms that case analysis is more effective as a tool for developing clinical reasoning than traditional lectures [23]. At the advanced level, students create their own anonymously presented cases based on personal or observed experiences, contributing to the ongoing process of breaking down the issues associated with addiction and creating a supportive community.

The role-playing activities are based on the empirical learning model (Kolb, 1984), according to which the most effective learning occurs through direct experience and reflection. Emotionally charged situations are simulated in the safe environment of role-playing (e.g., refusing a friend who is on the phone all the time or helping an “addicted” peer) in order to practice communication skills without real-world risks.

Self-regulation training is based on Zimmerman’s model of self-regulated learning [24], which consists of three stages: pre-planning, performance, and self-reflection. A typical exercise-“digital detox”-involves voluntarily limiting the use of digital devices for a specific period of time, followed by an opportunity to reflect on cognitive and emotional reactions. Screen time journals develop self-awareness-the ability to observe and evaluate one’s own thought processes and behavioral patterns.

Project-based methods are supported by constructivism and active learning [25]. They develop informational campaigns, create educational materials (booklets, videos, and social media posts), or implement a personal “Digital Detox” project - an individual action plan to reduce digital consumption by replacing it with offline activities. Such an approach changes students from passive recipients of information into active agents of improvement, contributing not only to the learning process but also to the creation of socially impactful tools that help reduce addiction within the academic community.

Analysis of Case Studies - Case studies involve examining real or simulated situations, such as a student spending 6-8 hours a day playing online games, to the detriment of their studies and relationships. Students are encouraged to identify symptoms, identify possible causes, and propose recovery plans. Analyze real situations, students contextualize abstract theories, diagnostic understanding, and intervention strategies. The iterative case analysis process develops both empathy and a critical distance that allows students to understand the ubiquity and complexity of cybercommunicative addiction in their own environments. Essentially, students engage with a specific narrative, whether real or fictional, yet highly realistic. This narrative should demonstrate how the Internet can present challenges for individuals. For example, there was a student, A., who

spent 6-8 hours a day playing online games, as a result of which he left school and fell out with his family. The task is to analyse this case in detail: to identify all the characteristics of addiction, both those that are observed by doctors and those that are expressed in behaviour.

Creation of own cases - Encourage students to anonymously create their own case studies, based on personal or collective experiences, and engage in personal engagement. An additional, more in-depth stage in understanding the topic is the transition from analyzing prepared materials to creating their own case studies. During this task, participants in small groups confidentially describe problematic situations involving the use of digital technologies that they observed or experienced as participants in their personal environment. Sharing them and then analyzing these anonymous stories as a group can really change how people see things. Thus, creating your own cases turns the learning environment into a laboratory for building collective knowledge and mutual support, where theoretical principles are tested and understood through the prism of the most valuable resource - the personal experience of its participants.

Game techniques and training - To grasp how awareness of the cybercommunicative addiction problem leads to concrete behavioral changes, methods are needed that allow not only to understand, but also to experience, process, and identify with new behavioral patterns. Game methods and trainings provide a safe space for this type of experiential learning, where personal experience and reflection come to the fore.

Brainstorming involves sessions during which a wide range of ideas-such as options for digital leisure - are generated without prior evaluation or selection. It is consistent and aligned in its approach to active learning strategies that encourage diversity, where the selection of diverse and effective examples helps enhance both the learning process itself and its practical application. Brainstorming, a technique that stimulates students to think broadly and creatively, contributes to the development of a range of realistic and appealing alternatives to offline activities, fostering a healthy attitude toward the use of digital technologies.

The goal of brainstorming sessions is to generate a wide range of ideas without prior selection or filtering. In the context of preventing cyberbullying, a common solution is to seek alternative forms of leisure that can compete with digital entertainment in terms of activity and enjoyment. Brainstorming encourages students to think broadly, proposing the widest possible variety of ideas-ranging from sports and creative hobbies to volunteering and community service. The next stage of critical evaluation and refinement leads to implementation, during which the most feasible and personally appealing options from this set are selected and described in detail. Through this process, participants develop a comprehensive and personalized set of activities, increasing their positive focus on digital well-being rather than on a restriction-based system.

Role-playing game - A role-playing game is an environment for non-violent communication, setting boundaries, and experimenting. provide does empathis. Just as simulated experiments accelerate learning in resource-limited settings, role-playing allows students to practice and refine behavioral strategies before applying them in real-world situations. Role-playing involves simulating complex, emotionally intense situations related to digital habits. The effectiveness of the approach can be viewed through the lens of analogies to active learning in artificial intelligence. Simulation experiments show that they can accelerate the learning of models in the presence of limited real-world data. A similar role-playing game acts as a "social interaction simulator", where students can test and improve behavioral strategies without fear of negative consequences that they may encounter in real life. This approach not only develops communicative competence but also allows for a deeper understanding of the motivations and experiences of all participants in a problem situation.

Self-Regulation Training involves teaching behavioral self-regulation skills through repeated, controlled exercises, such as a one-hour digital detox followed by an analysis of the participant's concentration and effectiveness. It is based on repetitive learning with feedback, which is fundamental to the learning processes of both humankind and computer systems. As conditions are systematically varied and results analyzed, learners develop metacognitive awareness and adaptive self-control-key

components of cybercommunication addiction resilience.

“Digital Detox” or Tech Time-Out (limited gadget use) involves a student keeping notes on their gadget usage each week: how they used them, the time spent, and the effectiveness of each activity. These habits are analyzed at the end of the period to identify opportunities for improvement. In order to ensure an objective assessment, students are asked to keep video-viewing and self-reflection journals, writing down their thoughts and feelings. The approach resembles evidence-based active learning methods, such as systematic data collection and analysis of device usage to help develop specific strategies. Through controlled self-monitoring, students master the principles of digital hygiene and become actively engaged in their own well-being. “Digital Detox” project is a customized monthly plan for participants to delete unnecessary apps, time-limit their use, and replace screen time activities with offline, meaningful activities. While participating in the project, participants keep screen time logs and self-assessment journals where they record their successes, challenges, and ideas.

The principle of *project-based learning*-for example, through workshops, projects, and case studies - enables the development of digital well-being skills and their application in public life. As a result, students go from being passive listeners to active participants in the process, contributing to change and applying their knowledge in daily life and community activities. With this approach, the results achieved become much more meaningful.

Information products creation-such as promotional materials, social media posts, brochures, or educational videos as part of project assignments-actively engages students in the process of bringing about positive change in their schools. Students not only strengthen their knowledge by applying it in practice but also contribute to the development of digital literacy and community resiliency. Fully-fledged educational products are developed as part of this method, aimed at preventing cybercommunication addiction in students’ educational setting.

Project “Digital Detox” refers to a comprehensive monthly plan designed to assist participants in removing unnecessary apps, setting time limits on their use, and replacing them with meaningful offline activities. Participants evaluate their progress and discuss their results after completing the plan. The above-mentioned methods for practical prevention (active and interactive) are shown in brief in table (Table 2).

Table №2 – Practical Prevention Methods

Type of method	Specific techniques	Conceptual basis	Methodology for skill development
Case analysis	Review of existing case studies, creation of own case studies	Contextual learning	Critical thinking, empathy, destigmatization
Active learning methods	Brainstorming, role-playing	Experiential learning (Kolb)	Generating alternatives, communication practice in a safe environment
Self-Regulation Training	Digital Detox, Diary Keeping	The Self-Regulation Model (Zimmerman)	Metacognitive Awareness, Self-Control
Project Assignments	The “Digital Diet” Information Product	Constructivism, Project-Based Learning	Knowledge Application in Real-World Situations, Sustainable Behavioral Change

By participating in problem-oriented, visual, dialogic, and analytically oriented lectures, students develop the cognitive foundations necessary to understand the mechanisms of addiction. analysis thanks to gamifications, trainings self regulation and project-based assignments, they acquire the practical skills and attitudes necessary to translate knowledge into action.

A theoretical analysis was conducted, which led to the development of the IPM-CCDP (Integrated Pedagogical Model for Cyber-Communicative Dependence Prevention) and which is introduced in Table 3.

Table 3 - Structure of the IPM-CCDP Integrated Pedagogical Model

INTEGRATED PEDAGOGICAL MODEL FOR CYBER-COMMUNICATIVE DEPENDENCE PREVENTION (IPM-CCDP)						
1.TARGET BLOCK		Goal: Prevention of cyber-communicative dependence among students through the development of the digital literacy, self-regulation, critical thinking, and the responsible digital behaviour				
2.THEORETICAL-METHODOLOGICAL BLOCK		Theoretical Foundation				
		Constructivism (Piaget, Vygotsky)	Social learning theory (Bandura)	Self-determination theory (Deci and Ryan)	Component model of addiction (Griffiths)	
3.CONTENT-PROCESSUAL BLOCK	Component	Pedagogical Tools and Activities		Objective	Expected Result	
	COGNITIVE COMPONENT	Problem-based lectures Visualized lectures Dialogic lectures Lectures with a guest experts		to develop an understanding of the addiction dynamics	Understanding of the mechanism, causes and consequences of cyber-communicative dependence	
	BEHAVIORAL COMPONENT	Analyses and development of case studies Role-playing Self-regulation trainings Project-based assignments		to develop healthy digital-behavior skills	Formation of healthy digital habits, self-regulation and the responsible digital behaviour	
	REFLEXIVE COMPONENT	Self-assessment journals Group Discussions Reflective Essays		to develop metacognitive awareness	Development of self-awareness and critical reflection on personal digital practices	
	PROJECT COMPONENT	Development of informational resources “Digital Diet” Project Development of Preventive Campaigns		to apply knowledge in a real-world context	Practical application of knowledge in real-life situations and peer education	
4.DIAGNOSTIC BLOCK		Criteria	Indicators	Assessment Methods	Levels	
		Cognitive Behavioral Reflexive Project	Knowledge about digital dependence; self-regulation skills; digital behavior patterns; level of reflection; ability to apply knowledge in practice	Questionnaires, tests, observation, self-assessment scales, analyses pf reflective journals, evaluation of projects	Low Medium High	
5.RESULT BLOCK		Formation of cyber-resilient students, characterized by:				
		Critical Digital Literacy	Healthy communication practices	Self-regulation skills	Responsible technology use	Reduced risk of cyber-communicative dependence
6.PRINCIPLES OF MODEL IMPLEMENTATION		Avoid Demonizing Technology (Livingstone & Helsper, 2010).		Desirability (Kuss & Griffiths, 2011).	Protection of privacy and personal safety (Buckingham, 2007).	.Interdisciplinarity.

Project-based learning is based upon the principles of constructivism and active learning and involves students completing complex, practice-oriented tasks over an extended period of time. Project-based learning may include the development of a cybercommunication addiction prevention campaign at the university, the creation of informational materials, or the development of a personal “digital diet” plan [25].

Key Principles for Implementing the Model:

Principle 1. Keep a Neutral Perspective on Technology. Effectively preventing problems should not rely on making technology seem harmful or making people feel anxious. In fact, they should be helped to view technology like a tool that's only as valuable as the way it's utilized [11]

Principle 2. Desirability. Preventive measures should offer attractive alternatives to prohibitions and restrictions [10].

Principle 3. Protection of privacy and personal safety. Personal digital habits should be discussed respectfully and in a safe and secure environment [12].

Principle 4. Interdisciplinarity. Addiction prevention in cyber communication requires an interdisciplinary approach, bringing together psychology, sociology, education, computer science, and ethics. Table 4 illustrates the components of the Integrated Pedagogical Model for the Prevention of Cyber-Communication Addiction.

Table 4 – Components of the IPM-CCDP (Integrated Pedagogical Model for Cyber-Communicative Dependence Prevention)

Component	Methods	Theoretical Framework	Expected Results
Cognitive	Problem-based, visual, interactive lectures; guest lectures by experts	Constructivism (Piaget, Vygotsky); social learning theory (Bandura)	Understanding the mechanisms of addiction
Behavioral	Case studies, role-playing exercises, self-regulation training	Experiential learning (Kolb); self-regulation model (Zimmerman)	Skills for healthy digital behavior
Reflective	Self-assessment journals, group discussions	Self-determination theory (Deci & Ryan)	Metacognitive awareness
Project-based	Information products, “Digital Diet”	Constructivism; project-based learning (Thomas)	Active learning

Based on the theoretical analysis conducted, the following findings can be summarized.

1. Despite the fact that the traditional lecture format is an effective tool, its applicability for behavioral change remains limited. Preventing cyber-addiction requires lecturers to adopt problem-oriented, visual, interactive, and knowledge-integrated teaching methods.

2. Active learning methods (case studies, group role-playing, self-regulation training, and project assignments) serve as a necessary addition to lecture-based methods, given their ability to facilitate the transformation of theoretical knowledge to practical skills and behavioral patterns.

3. The IPM-CCDP model integrates cognitive, behavioral, reflective, and project-based components, generating a systemic effect rather than the sum of separate activities. One of the key aspects of the model is the connection between the different parts: the cognitive part sets the theoretical foundation, the behavioral part lets you practice skills, the reflective part keeps you aware, and the project-based part shows you how to apply these changes in real life.

Scope of the study and suggestions for future research

These findings have several issues. To start with, this study is a theoretical and methodological analysis and does not include empirical data on the effectiveness of the proposed model. Furthermore,

the literature review relied primarily on English- and Russian-language sources, which may restrict consideration of the specific characteristics of other educational systems. Finally, the study did not conduct a comparative analysis of the effectiveness of various lecture formats (in-person, online, hybrid) due to a lack of empirical data.

Future research topics include:

1. Empirical testing of the effectiveness of the IPM-CCDP in a quasi-experimental design (pre-post) with a control group.
2. Development and validity of criteria for assessing students' digital literacy.
3. The adaptation of the model to various educational contexts (high schools, colleges, and continuing education programs).
4. A comparative analysis of the effectiveness of in-person, online, and hybrid formats for implementing the model.
5. The implementation of a training program

Comparative Analysis of the IPM-CCDP Model with Existing Approaches is shown in Table 5.

Table 5 – Comparative Analysis of the IPM-CCDP Model with Existing Approaches

Approach	Limitations	Advantages of IPM-CCDP
Informational lectures about the threats of internet addiction	Build knowledge but not skills	Knowledge and practice integration
Self-regulation training	Develop skills but without a theoretical foundation	Theoretical basis for behavioral change
Specific methods (case studies, role-playing)	Used in isolation	Comprehensive connection between components
Western prevention models	Not taking the post-Soviet context into account	Integration into the Kazakhstani educational environment

Conclusion

An analysis of the theoretical literature resulted in the following findings.

Although traditional lectures are an efficacious means of disseminating information, there are limitations to their applicability in terms of changing behavior. Preventing cyber-communication addiction requires that lecture methods be transformed toward problem-oriented approaches, visualization, interactive engagement, and expert knowledge integration.

Practically oriented methods as case studies, role-playing, self-regulation training, and project-based assignments are a necessary complement to lecture-based methods, since they facilitate the transformation of theoretical knowledge into practical skills and behavioral strategies.

The theoretical foundation of the comprehensive prevention model consists of constructivist learning theory, social learning theory, self-determination theory, and the component model of addiction. Combining these theoretical approaches allows for the development of prevention measures that not only inform but also motivate and not only prevent but also help form alternative behaviors.

The next finding is that one of the key outcomes of implementing the integrated model is the transformation of the student's role: from being a passive recipient of information, the student becomes an active participant responsible for their own cyber safety.

The theoretical and methodological framework introduced throughout this paper presents opportunities for further empirical research aimed at testing the efficacy of specific methods, developing criteria for assessing digital resilience, and adapting the proposed approaches to various educational contexts.

Funding information

This research has been funded by the Science Committee of the Ministry of Science and Higher Education of the Republic of Kazakhstan Grant № AP26103383.

BIBLIOGRAPHY

1. Young K.S. Internet addiction: the emergence of a new clinical disorder // *CyberPsychology & Behavior*. – 1998. – Vol. 1, №3. – P. 237-244. <https://doi.org/10.1089/cpb.1998.1.237>.
2. Griffiths M.D. A 'components' model of addiction within a biopsychosocial framework // *Journal of Substance Use*. – 2005. – Vol. 10, №4. – P. 191-197. <https://doi.org/10.1080/14659890500114359>.
3. Kariyev A., Orazbayeva F., Zhunusbekova A., Kenzhetaeva R. Types of Internet addiction among Kazakhstan students in the digital educational space // *Insight: The Psychological Dimensions of Society*. – 2025. – Vol. 13. – P. 240-259. <https://doi.org/10.32999/2663-970X/2025-13-10>.
4. Biggs J. Teaching for quality learning at university. – 2nd ed. – Buckingham: Open University Press, 2003. – 309 p.
5. Ramsden P. Learning to teach in higher education. – 2nd ed. – London: Routledge, 2003. – 288 p. <https://doi.org/10.4324/9780203507711>.
6. Piaget J. Science of education and the psychology of the child. – New York: Orion Press, 1970. – 186 p.
7. Vygotsky L.S. Mind in society: the development of higher psychological processes / ed. by M. Cole, V. John-Steiner, S. Scribner, E. Souberman. – Cambridge: Harvard University Press, 1978. – 159 p. <https://doi.org/10.2307/j.ctvjf9vz4>.
8. Bandura A. Social learning theory. – Englewood Cliffs: Prentice-Hall, 1977. – 247 p.
9. Deci E.L., Ryan R.M. The “what” and “why” of goal pursuits: human needs and the self-determination of behavior // *Psychological Inquiry*. – 2000. – Vol. 11, №4. – P. 227-268. https://doi.org/10.1207/S15327965PLI1104_01.
10. Kuss D.J., Griffiths M.D. Internet gaming addiction: a systematic review of empirical research // *International Journal of Mental Health and Addiction*. – 2012. – Vol. 10. – P. 278-296. <https://doi.org/10.1007/s11469-011-9318-5>.
11. Livingstone S., Helsper E.J. Balancing opportunities and risks in teenagers' use of the internet: the role of online skills and internet self-efficacy // *New Media & Society*. – 2010. – Vol. 12, №2. – P. 309-329. <https://doi.org/10.1177/1461444809342697>.
12. Buckingham D. Digital media literacies: rethinking media education in the age of the Internet // *Research in Comparative and International Education*. – 2007. – Vol. 2, №1. – P. 43-55. <https://doi.org/10.2304/rcie.2007.2.1.43>.
13. Kerimbayeva B.T., Kerimbekov Y.R., Sapargaliyeva D.D. The Importance of Developing a Network Communicative Culture of the Future Teacher // *Iasui universitetinin habarshysy*. – 2022. – №4 (126). – P. 281–293. <https://doi.org/10.47526/2022-4/2664-0686.24>
14. Kerimbayeva B.T., Kerimbekov Y.R., Satbai Zh.I. Network Communication Culture Impact on the Lifelong Learning of Future Teachers // *Iasui universitetinin habarshysy*. – 2024. – №3 (133). – B. 191–205. <https://doi.org/10.47526/2024-3/2664-0686.86>
15. Tao R., Huang X., Wang J., Zhang H., Zhang Y., Li M. Proposed diagnostic criteria for internet addiction // *Addiction*. – 2010. – Vol. 105, №3. – P. 556-564. <https://doi.org/10.1111/j.1360-0443.2009.02828.x>.
16. Dewey J. Experience and education // *The Educational Forum*. – 1986. – Vol. 50, №3. – P. 241-252.
17. Barrows H.S. A taxonomy of problem-based learning methods // *Medical Education*. – 1986. – Vol. 20, №6. – P. 481-486. <https://doi.org/10.1111/j.1365-2923.1986.tb01386.x>.
18. Strobel J., van Barneveld A. When is PBL more effective? A meta-synthesis of meta-analyses comparing PBL to conventional classrooms // *Interdisciplinary Journal of Problem-Based Learning*. – 2009. – Vol. 3, №1. – P. 44-58. <https://doi.org/10.7771/1541-5015.1046>.
19. Paivio A. Mental representations: a dual coding approach. – New York: Oxford University Press, 1986. – 336 p. <https://doi.org/10.1093/acprof:oso/9780195066661.001.0001>.
20. Mayer R.E. The Cambridge handbook of multimedia learning. – 2nd ed. – New York: Cambridge University Press, 2014. – 930 p. <https://doi.org/10.1017/CBO9781139547369>.
21. Prince M. Does active learning work? A review of the research // *Journal of Engineering Education*. – 2004. – Vol. 93, №3. – P. 223-231. <https://doi.org/10.1002/j.2168-9830.2004.tb00809.x>.

22. Knowles M.S. The adult learner: a neglected species. – 3rd ed. – Houston: Gulf Publishing, 1984. – 292 p.
23. Thistlethwaite J.E., Davies D., Ekeocha S., Kidd J.M., MacDougall C., Matthews P., Purkis J., Clay D. The effectiveness of case-based learning in health professional education // Medical Teacher. – 2012. – Vol. 34, №6. – P. 421-444. <https://doi.org/10.3109/0142159X.2012.680939>.
24. Zimmerman B.J. Becoming a self-regulated learner: an overview // Theory Into Practice. – 2002. – Vol. 41, №2. – P. 64-70. https://doi.org/10.1207/s15430421tip4102_2.
25. Thomas J.W. A review of research on project-based learning. – San Rafael: Autodesk Foundation, 2000. – 47 p.

Киберкоммуникативтік тәуелділіктің алдын алу контексінде дәріске негізделген оқыту әдістерінің теориялық негіздері және сыни талдауы

Андатпа. Бұл мақалада жоғары оқу орындарының студенттерінде киберкоммуникациялық тәуелділіктің алдын алуға бағытталған дәрістік және практикалық оқыту әдістемесін әзірлеуге арналған теориялық зерттеу нәтижелері сипатталған. Біздің зерттеу әдіснамамыздың негізіне негізгі педагогикалық теорияларды жүйелі талдау және шолу (мысалы, конструктивизм, әлеуметтік оқыту теориясы және өзін-өзі анықтау теориясы), цифрлық тәуелділік бойынша заманауи зерттеулерге сыни шолу (2010-2025 жж.), сондай-ақ интеграцияланған теориялық модельді әзірлеу кірді. Мінез-құлықты өзгертудегі дәстүрлі дәрістердің тиімділігін бағалау жүргізілді; дәрістердің қолайлы форматтары таңдалды және ретке келтірілді (проблемалық-бағдарланған, визуализацияланған, диалогтық және сарапшылардың қатысуымен); қажетті практикалық әдістер анықталды (нақты жағдайларды талдау, рөлдік ойындар, өзін-өзі реттеуге үйрету және жобалық тапсырмалар); осы шолу негізінде киберкоммуникациялық тәуелділіктің алдын алудың интеграцияланған педагогикалық моделі (IPM-ccdp), оның ішінде когнитивті, мінез-құлық, рефлексиялық және дизайн компоненттері әзірленді. Білім берудің цифрлық трансформациясы шеңберінде киберкоммуникациялық тәуелділік проблемасы оқытудың дәстүрлі форматтарын интерактивті, тәжірибеге бағдарланған әдістермен үйлестіретін кешенді педагогикалық тәсілді қолдануды талап етеді. Бұл зерттеу киберкоммуникацияға тәуелділіктің тиімді алдын алу үшін оқушының рөлін пассивті ақпарат алушыдан өзінің цифрлық әл-ауқатына жауапты белсенді қатысушыға айналдыру қажет екенін көрсетеді. Зерттеудің жаңалығы – классикалық педагогикалық теорияларды гриффитстің тәуелділік моделімен біріктіру арқылы педагогикалық әдістер мен олардың теориялық негіздерін дәйекті интеграциялау.

Кілт сөздер: киберкоммуникациялық тәуелділік, алдын алу, оқыту әдістері, дәріс форматтары, цифрлық гигиена, өзін-өзі реттеу, кешенді педагогикалық модель.

Теоретические основы и критический анализ методов лекционного формата обучения в контексте профилактики киберкоммуникативной зависимости

Аннотация. В данной статье представлены результаты теоретического исследования, целью которого являлась разработка методики лекционного и практического обучения, направленной на профилактику киберкоммуникационной зависимости у студентов высших учебных заведений. В методологическую основу исследования составили систематический анализ и обзор основных педагогических теорий (таких как конструктивизм, теория социального обучения и теория самоопределения), критический анализ современных исследований по цифровой зависимости (2010–2025 гг.), а также разработка интегрированной теоретической модели. Проведена оценка эффективности традиционных лекционных методов в изменении поведенческих установок; определены и систематизированы эффективные форматы лекций (проблемно-ориентированные, визуализированные, диалогические и лекции с участием экспертов); выявлены необходимые практические методы (анализ конкретных ситуаций, ролевые игры, тренировка саморегуляции и проектные задания); на основе данного обзора разработана интегрированная педагогическая модель профилактики киберкоммуникационной зависимости (IPM-CCDP), включающая когнитивный, поведенческий, рефлексивный и проектный компоненты. В рамках цифровой трансформации образования проблема киберкоммуникационной зависимости требует применения комплексного педагогического подхода, сочетающего традиционные форматы обучения с интерактивными,

практико-ориентированными методами. Результаты исследования показывают, что для эффективной профилактики киберкоммуникационной зависимости необходимо трансформировать роль обучающегося от пассивного получателя информации к активному участнику образовательного процесса. Новизна исследования заключается в последовательной интеграции педагогических методов и их теоретических основ посредством объединения классических педагогических теорий с моделью зависимости Гриффитса.

Ключевые слова: киберкоммуникативная зависимость, профилактика, методы обучения, форматы лекций, цифровая гигиена, саморегуляция, комплексная педагогическая модель.

Information about the authors

Sadykova S.A. – PhD, Associate Professor, K. Zhubanov Aktobe Regional University, e-mail: ssadykova@zhubanov.edu.kz, Kazakhstan, Aktobe.

Kerimbayeva B.T. – The Corresponding Author, PhD, Associate Professor of K. Zhubanov Aktobe Regional University, e-mail: bkerimbayeva@zhubanov.edu.kz, Kazakhstan, Aktobe.

Kerimbekov Y.R. – PhD, Senior Lecturer, South Kazakhstan Pedagogical University named after O. Zhanibekov, e-mail: yerzhan@okmpu.kz, Kazakhstan, Shymkent.

Авторлар туралы мәлімет

Садыкова С.А. – PhD, қауымдастырылған профессор, Қ. Жұбанов атындағы Ақтөбе өңірлік университеті, e-mail: ssadykova@zhubanov.edu.kz, Қазақстан, Ақтөбе қ.

Керімбаева Б.Т. – корреспондент-автор, PhD, Қ. Жұбанов атындағы Ақтөбе өңірлік университетінің қауымдастырылған профессоры, e-mail: bkerimbayeva@zhubanov.edu.kz, Қазақстан, Ақтөбе қ.

Керімбеков Е.Р. – PhD, аға оқытушы, Ө. Жәнібеков атындағы Оңтүстік Қазақстан педагогикалық университеті, e-mail: yerzhan@okmpu.kz, Қазақстан, Шымкент қ.

Сведения об авторах

Садыкова С.А. – PhD, доцент, Актюбинский региональный университет имени К. Жубанова, e-mail: ssadykova@zhubanov.edu.kz, Казахстан, г. Актобе.

Керимбаева Б.Т. – автор-корреспондент, PhD, ассоциированный профессор Актюбинского регионального университета имени К. Жубанова, e-mail: bkerimbayeva@zhubanov.edu.kz, Казахстан, г. Актобе.

Керимбеков Е.Р. – PhD, старший преподаватель, Южно-Казахстанский педагогический университет имени О. Жанибекова, e-mail: yerzhan@okmpu.kz, Казахстан, г. Шымкент.