

Danish Scientific Journal



Danish Scientific Journal

Nº108 2026

# Danish scientific journal

# DSJ



№108/2026

ISSN 3375-2389

## Vol.1

The journal publishes materials on the most significant issues of our time. Articles sent for publication can be written in any language, as independent experts in different scientific and linguistic areas are involved.

The international scientific journal “Danish Scientific Journal” is focused on the international audience. Authors living in different countries have an opportunity to exchange knowledge and experience.

The main objective of the journal is the connection between science and society.

Scientists in different areas of activity have an opportunity to publish their materials.

Publishing a scientific article in the journal is your chance to contribute invaluable to the development of science.

Editor in chief – Lene Larsen, Københavns Universitet

Secretary – Sofie Atting

- Charlotte Casparsen – Syddansk Erhvervsakademi, Denmark
- Rasmus Jørgensen – University of Southern Denmark, Denmark
- Claus Jensen – Københavns Universitet, Denmark
- Benjamin Hove – Uddannelsescenter Holstebro, Denmark
- William Witten – Iowa State University, USA
- Samuel Taylor – Florida State University, USA
- Anie Ludwig – Universität Mannheim, Germany
- Javier Neziraj – Universidade da Coruña, Spain
- Andreas Böhler – Harstad University College, Norway
- Line Haslum – Sodertorns University College, Sweden
- Daehoy Park – Chung Ang University, South Korea
- Mohit Gupta – University of Calcutta, India
- Vojtech Hanus – Polytechnic College in Jihlava, Czech Republic
- Agnieszka Wyszynska – Szczecin University, Poland

Also in the work of the editorial board are involved independent experts

1000 copies

Danish Scientific Journal (DSJ)

Istedgade 104 1650 København V Denmark

email: [publishing@danish-journal.com](mailto:publishing@danish-journal.com)

site: <http://www.danish-journal.com>

# CONTENT

## AGRICULTURAL SCIENCES

**Hashimova E.**

SALINIZATION OF SOILS IN THE SHIRVAN PLAIN AND  
ITS IMPACT ON AGRICULTURAL PRODUCTIVITY ..... 3

## ECONOMIC SCIENCES

**Shamugia A.**

DIGITAL MARKETING STRATEGY BASED ON THE  
PRACTICAL EXAMPLE OF THE COMPANY "BMW" ..... 5

**Luarsabishvili M.**

DEVELOPMENT OF AN INNOVATIVE ECONOMY IN  
GEORGIA.....11

**Gelashvili M.**

TOURIST RESOURCES OF GEORGIA AND  
DEVELOPMENT PROSPECTS ..... 7

## JURISPRUDENCE

**Endri Balla**

DEVELOPMENT AND REGULATION OF ELECTRONIC  
CONTRACTS IN THE DIGITAL MARKET ..... 13

**Valiyev F.**

HISTORICAL SUSTAINABILITY AND DYNAMISM OF  
CRIMINAL AND CUSTODIAL PUNISHMENT POLICY.  
CRIME OR DISEASE? .....17

## PEDAGOGICAL SCIENCES

**Balasanian O.**

TRANSITION FROM DIDACTIC ALIENATION TO  
COMPETENCE-ORIENTED LEARNING MODELS FOR  
THE DIGITAL GENERATION IN HIGHER  
EDUCATION ..... 21

## PHILOLOGICAL SCIENCES

**Chikvaidze A.**

THE REPRESENTATION AND REPRODUCTION OF  
GENDER ASYMMETRY IN LANGUAGE: A  
SOCIOCULTURAL APPROACH ..... 26

## PHYSICAL SCIENCES

**Antonov A.**

PLANET EARTH IS DESIGNED MUCH MORE COMPLEX  
THAN IS STATED BY MODERN SCIENTIFIC  
KNOWLEDGE ..... 30

## POLITICAL SCIENCES

**Shirinzade K.**

ANALYSIS OF THE CHINESE TRANSPORT SERVICES  
MARKET.....46

# PEDAGOGICAL SCIENCES

## TRANSITION FROM DIDACTIC ALIENATION TO COMPETENCE-ORIENTED LEARNING MODELS FOR THE DIGITAL GENERATION IN HIGHER EDUCATION

**Balasanian O.**

*Senior lecturer*

*Simon Kuznets Kharkiv National University of Economics,  
Kharkiv, Ukraine*

<https://doi.org/10.5281/zenodo.20449089>

### Abstract

The article explores the transformation of the higher education educational space under conditions of didactic uncertainty and the rapid proliferation of generative artificial intelligence technologies. The relevance of the study is driven by the profound rift between outdated reproductive teaching methods and the cognitive-psychological profile of the modern digital-generation student. The study aims to provide a theoretical substantiation and practical design of innovative didactic models for teaching English for Specific Purposes (ESP) that counteract the phenomenon of didactic alienation. A complex of methods was applied, including systemic-action analysis, comparative deconstruction of traditional methodologies, and didactic modeling.

As a result of the research, new task formats were developed and substantiated across three pivotal domains of foreign language training. For vocabulary skill development, tools of contextual cognitive mapping and corpus analysis are proposed. To overcome foreign language anxiety and mitigate the "switched-off cameras" effect in distance learning, a two-stage cooperative engagement technology is substantiated. In the realm of writing, a method of two-wave reverse engineering of text was developed, integrating generative AI as a didactic partner and transforming student activity from mechanical copying into linguistic evaluation. It is determined that implementing these approaches requires a reconfiguration of the instructor's professional-pedagogical culture through developing digital and facilitative competences. Based on the results, a transformation matrix converting traditional tasks into innovative ones was formulated, and prospects for further empirical research were outlined.

**Keywords:** higher education, digital generation, didactic alienation, English for Specific Purposes (ESP), generative artificial intelligence, two-wave reverse engineering, new-generation instructor.

### Introduction

The modern higher education system functions in a state of permanent didactic uncertainty driven by intensive technological transformation and the systemic crisis of the classical knowledge-centered learning paradigm. The traditional function of universities as the pivotal sources and transmitters of fundamental knowledge has been completely dismantled by barrier-free access to global information streams and generative artificial intelligence tools. Within the modern digitalized educational environment, a new generation of students emerges as the core subject of the educational process, possessing a cognitive profile with a range of specific attributes. Modern learners are characterized by a screen-oriented mentality, non-linear perception of large textual arrays, and a pronounced pragmatics regarding the utility of acquiring theoretical material. The established academic model, focused on the passive accumulation of information (the "know-what" framework), enters into acute contradiction with the actual cognitive demands of students, causing didactic alienation and a decline in motivation.

Overcoming this systemic crisis necessitates the deconstruction of outdated, lecture-centric formats and a transition toward designing a flexible, competence-oriented environment (the "know-how" framework). A radical shift in the educational vector implies that the focus of didactic attention moves from the process of transferring ready-made constants to the development of transversal skills: critical analysis, the ability to verify sources amidst information noise, and a readiness to

solve non-standard problems. Thus, the relevance of this study is underscored by the need to theoretically substantiate and practically instrument didactic navigation, which will allow transforming the challenges of the digital era into effective mechanisms for shaping the professional agency of early-career specialists.

### Literature Review

The issue of adapting higher education to the challenges of a global digitalized society remains a focal point for many contemporary researchers. The scientific discourse surrounding the cognitive characteristics of the new generation of students unfolds in the pioneering works of M. Prensky, who introduced the foundational concept of "digital natives," as well as in the contemporary critical studies by D. Rowlands and M. Spitzer, who examine the transformation of cognitive strategies under the influence of screen culture. The phenomenon of shifting from linear information perception to network-based and mosaic-like processing has been analyzed in detail within the framework of the connectivism theory by G. Siemens and S. Downes, who view knowledge as a network node rather than a static repository. The psycho-pedagogical aspects of didactic alienation and the deficit of sustained attention span driven by the pressure of information noise are highlighted in studies by T. Brink and J. Twenge, who captured the reformatting of intrinsic learning motivation among Generations Z and Alpha.

Another fundamental vector of research is associated with the transition from a knowledge-centered paradigm to the competence-based architecture of higher

education. The issues of modeling an educational environment capable of responding flexibly to conditions of didactic uncertainty are actively developed within the frameworks of the experiential learning theory by D. Kolb and the process-oriented approach by R. Barnett. Within the domestic scientific discourse, the transformation of higher education in the context of European educational standards and the competence-based approach is systemically analyzed in the works of prominent Ukrainian scholars, including V. Kremen, V. Luhovyi, and O. Lokshyna. The scholarly works of western researchers such as F. Eweve and H. Gardner substantiate the priority of developing transversal (transferable) competences and multiple intelligences that ensure the viability and adaptability of a specialist in a dynamic labor market.

Despite the substantial volume of literature dedicated independently to the cognitive traits of the new generation (e.g., the works of C. Gano) and to the competence-based methodology, the issue of integrating the cognitive demands of modern students into a cohesive model for designing a competence-oriented environment amid the dominance of generative artificial intelligence remains insufficiently conceptualized.

### Research Objective and Methods

The objective of the article is to theoretically substantiate the transformation of the modern educational space based on a comparative analysis of the cognitive demands of new-generation students and to identify effective didactic tools for transitioning from knowledge-centered to competence-oriented learning under conditions of technological uncertainty. To achieve this objective, a complex of general scientific and special analytical methods was applied, including: theoretical review and critical analysis of psychological and pedagogical literature to outline the essence of didactic uncertainty in the AI era; the comparative method to contrast traditional learning formats with the mental patterns of the digital generation; and systemic analysis and generalization to structure the challenges of higher education and formulate concrete proposals for designing a flexible competence-based environment.

### Results

An objective determination of the specifics of modern didactic uncertainty requires a primary analysis of the cognitive-psychological profile of the modern student, who emerges as the central subject of didactic interaction. The contemporary higher education learner is a representative of the digital generation, whose development occurred under conditions of unprecedented information pressure, total mobility, and the dominance of interactive screen media. This generation is characterized by non-linear thinking, a high speed of primary data scanning coupled with a diminished capacity for prolonged attention span, and a pronounced pragmatism: the student's cognitive resource is activated only when they clearly perceive the applied value of information for their future professional trajectory.

The classical educational paradigm, founded on the reproductive accumulation of static knowledge according to the "know-what" principle, enters into acute contradiction with this mental profile. Attempts to instruct modern students using outdated, lecture-centric

methods lead to persistent didactic alienation, loss of motivation, and the simulation of educational activity. Overcoming this rift requires a radical shift in the very vector of learning: a transition to a flexible, action-based environment according to the "know-how" principle, where language learning is integrated into the real context of professional interaction (Barnett, 2015). The practical implementation of this new paradigm acquires a specific urgency within the framework of teaching English for Specific Purposes (ESP), where the systemic didactic rift is clearly traced across three pivotal domains of foreign language training: professional vocabulary acquisition, oral fluency development (Speaking), and academic/professional writing (Writing).

In the domain of professional terminology acquisition and semanticization, traditional exercises, such as the mechanical memorization of lists of isolated words, bilingual translation of authentic but static descriptive texts, or lexical gap-fill tests (fill-in-the-gaps), have completely lost their didactic potential. When any definition is accessible in a single click, the student's brain, operating in an energy-saving mode, blocks the long-term retention of language units detached from context (Prensky, 2012). Conversely, profound acquisition of professional vocabulary occurs via tools of contextual cognitive mapping and corpus analysis.

Instead of passive glossary study, students are assigned to analyze the actual functioning of a term within the language environment using open linguistic corpora (e.g., *COCA* or *Sketch Engine*). Students independently investigate the live collocations of a business term, identify its stylistic connotations in real corporate reports or Financial Times articles, and construct dynamic mind maps based on these findings. The subsequent stage involves immediate operationalization: the vocabulary is integrated into a gamified simulation environment, where teams must resolve a case using the learned language formulas as the sole tool to achieve a business objective (e.g., concluding a contract in a mini-game). Consequently, we achieve a transition from mechanical reception to conscious production: the student retains not just a word, but its functional place within the professional discourse (Kolb, 2014).

The most critical destruction in developing oral professional communication skills (Speaking) is the psychological barrier and pronounced foreign language anxiety, which is catalyzed under conditions of distance learning. The specificity of the modern virtual educational space lies in the mass phenomenon of "switched-off cameras," where students hide behind the anonymous "black square" of the screen, completely dismantling visual contact. This deprivation of non-verbal communication maximizes psychological discomfort, intensifies the sense of isolation, and provokes a total refusal of spontaneous speech utterances due to self-consciousness or a panicky fear of making mistakes heard by the entire digital audience. In such realities, traditional methods of frontal questioning, classical brainstorming, or artificial paired dialogues are completely blocked.

Resolving this problem requires the application of a two-stage technology of decentralized anonymous and semi-autonomous engagement through cooperative

learning tools. At the first, preparatory stage, to reactivate brainstorming without psychological pressure, interactive digital boards (such as *Padlet* or *Miro*) are utilized. Students record their ideas regarding the resolution of a professional problem entirely anonymously via text stickers, which eliminates the primary fear of public linguistic failure. At the second stage, students are distributed into micro-groups (breakout rooms of 3–4 individuals) to execute tasks using the "fishbowl" method or case debates based on *CARLA* methodology. In the absence of constant instructor supervision within these safe, isolated clusters, the level of anxiety drops sharply, and students willingly activate their microphones to defend team decisions. Concurrently, the instructor completely relinquishes immediate error correction during speech, transitioning to the position of a facilitator who conducts delayed correction of linguistic deviations exclusively after the interaction has concluded. Through this, we transform speech activity: the student's focus of attention shifts from the linguistic flawlessness of form to the pragmatic success of communication, which completely liquidates the psychological barrier (Twenge, 2017).

In the realm of foreign language writing skills development (Writing), the primary challenge of the digital era is the total crisis of authenticity caused by the mass diffusion of generative artificial intelligence. Traditional assignments, such as drafting business letters, essays, or analytical briefs as asynchronous homework, have completely lost their diagnostic and didactic rationale, as they are outsourced to neural networks in the majority of cases, creating a "competence placebo effect" among students. Attempts at administrative bans or the utilization of flawed AI detectors merely lead the problem into a dead end. ESP methodology must integrate AI algorithms as a fully-fledged didactic partner through the method of two-wave reverse engineering of text.

In the first wave, the student's task is to obtain a baseline text from the neural network through deliberate prompt engineering. The quality and precision of the formulated English-language prompts are specifically assessed, where the learner must clearly define the role, context, target audience, and stylistic constraints for the AI. In the second wave, the student performs the role of a rigorous linguistic expert: they conduct a deep critical analysis of the generated text: verifying factual accuracy, identifying stylistic anomalies (AI "hallucinations"), optimizing professional vocabulary for a specific business context, and rewriting weak passages manually. The result of this approach is a qualitative change in the nature of writing activity: it shifts from

mechanical copying to a higher level of analytical thinking, where the learner develops editing skills, critical media literacy, and a profound understanding of text structure (Siemens, 2005).

The specified transformation of the instructional methodological system imposes fundamentally new demands on the professional profile of the faculty member, actualizing the concept of the new-generation instructor. The modern educator can no longer function within the outdated role model of an exclusive information transmitter; instead, the reconfiguration of their professional-pedagogical culture through the integration of digital, facilitative, and andragogical competences acquires critical importance. In the psycho-pedagogical dimension, this necessitates continuous professional development and the development of specific skills associated with managing decentralized groups. The new-generation instructor must possess tools for virtual moderation, methods for stimulating group dynamics under conditions of non-verbal communication channels deprivation, and technologies for designing gamified and context-oriented educational content.

A scientifically substantiated shift in the vector of teaching activity implies a transition from directive control to the didactic support of students' autonomous cognitive activities. This transforms the pedagogical role configuration into a coordinator of cognitive streams and an expert in information verification, capable of integrating the technological tools of artificial intelligence into the course's didactic matrix. Developing these competences allows the instructor to flexibly restructure the learning trajectory to match the specific patterns of the digital generation, neutralize phenomena of didactic alienation, and effectively transform the challenges of neural network technological dominance into viable instruments for shaping the professional agency and competitiveness of the future specialist (Luhovyi, 2022).

The conducted analysis allows for the systematization of the didactic transformation of teaching English for Specific Purposes (ESP) under conditions of digital uncertainty. The traditional reproductive model, oriented toward the passive accumulation of static knowledge, has proven ineffective due to its acute contradiction with the cognitive-psychological profile of the modern student. Restructuring the educational environment to match the thinking patterns of the digital generation requires the decentralization of the learning process and the operationalization of tasks.

The conceptual shifts across the three pivotal domains of foreign language training can be summarized within the following transformation matrix.

Table 1

Comparative analysis of traditional and innovative ESP instructional models and their cognitive effects			
Training Domain	Traditional Format (Destruction)	Innovative Format (Modernization)	Cognitive-Didactic Effect
<b>Vocabulary</b>	Mechanical memorization of isolated glossaries, descriptive translation.	Contextual cognitive mapping, linguistic corpus analysis ( <i>COCA</i> , <i>Sketch Engine</i> ), simulation games.	Transition from passive reception to conscious production of the terminology system within live professional discourse.
<b>Speaking</b>	Frontal questioning, artificial dialogues; communication blocking due to the "switched-off cameras" phenomenon.	Two-stage engagement: anonymous brainstorming ( <i>Miro</i> , <i>Padlet</i> ) $\rightarrow$ micro-group case debates ( <i>CARLA</i> ) with delayed error correction.	Complete liquidation of foreign language anxiety, shifting the focus toward the pragmatic success of communication.
<b>Writing</b>	Asynchronous essays/letters (crisis of authenticity due to total, uncontrolled outsourcing to AI).	Two-wave reverse engineering of text: prompt engineering $\rightarrow$ linguistic evaluation and manual rewriting.	Elimination of the "competence placebo effect"; development of critical analysis, media literacy, and editing skills.

In the psycho-pedagogical dimension, the described modernization shifts the instructor's role from a directive transmitter of information to a facilitator of cognitive activity. The obtained results prove that integrating digital tools and generative AI not as a threat, but as a didactic partner, allows for effectively overcoming the phenomenon of didactic alienation and ensuring the formation of sustainable professional agency in future specialists.

### Conclusions

The study provides a theoretical substantiation and practical operationalization of the higher education educational space transformation under conditions of didactic uncertainty and the mass proliferation of generative artificial intelligence technologies. It is demonstrated that the pivotal prerequisite for overcoming the crisis of reproductive learning is a profound understanding of the modern student's cognitive-psychological profile, which is characterized by mosaic-like information perception, a screen-oriented mentality, and high pragmatization of learning demands. The proposed transition to a competence-oriented and action-based environment allows for neutralizing the phenomenon of didactic alienation by integrating knowledge into the actual context of learners' future professional activities.

The theoretical and practical value of the obtained results lies in the deconstruction of outdated instructional formats and the development of innovative didactic models within the framework of teaching English for Specific Purposes (ESP). The implementation of linguistic corpus analysis methods, two-stage cooperative engagement technologies under distance learning conditions (via the utilization of anonymous interactive boards and isolated virtual clusters), and the method of two-wave reverse engineering of text when interacting with neural networks proves highly effective. This approach allows for the complete liquidation of students' foreign language anxiety caused by the deprivation of non-verbal communication channels, minimizes the "competence placebo effect," and reorients

the educational process toward developing transversal skills, critical thinking, and media literacy.

The systemic restructuring of the ESP instructional methodological system is inseparable from the reconfiguration of the higher education faculty member's professional-pedagogical culture. The concept of the new-generation instructor implies the integration of digital, facilitative, and andragogical competences, which transforms the pedagogical role configuration from a monological information source into a coordinator of cognitive streams and a mentor. Prospects for further research in this direction are associated with the empirical measurement of the proposed models' long-term effectiveness, the development of assessment criteria for students' prompt engineering, and the optimization of professional development programs for academic staff to operate within a high-tech educational environment.

### References:

- Barnett, R. (2015). *Understanding the University*. Routledge.
- Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development* (2nd ed.). Pearson FT Press.
- Kremen, V. H. (2023). *Filosofia liudynotsentryzmu v systemi suchasnykh tsinnostei* [Philosophy of human-centrism in the system of modern values]. *Herald of the National Academy of Educational Sciences of Ukraine*, 5(1). [http://nbuv.gov.ua/UJRN/HNAESU\\_2023\\_5\\_1\\_30](http://nbuv.gov.ua/UJRN/HNAESU_2023_5_1_30) [Кремень В. Г. (2023). Філософія людиноцентризму в системі сучасних цінностей. Вісник Національної академії педагогічних наук України, 5(1).]
- Lokshyna, O. (2007). *Rozvytok kompetentnisnogo pidkhodu v osviti Yevropeiskoho Soiuzu* [Development of competence-based approach in education of the European Union]. *Shliakh Osvity*, (1), 16–21. [Локшина О. (2007). Розвиток компетентнісного підходу в освіті Європейського Союзу. Шлях освіти, (1), 16–21.]

5. Luhovyi, V. I., Kremen, V. H., Bykov, V. Y., Liashenko, O. I., Topuzov, O. M., Saukh, P. I., Gurzhii, A. M., Sysoieva, S. O., & Madzigon, V. M. (2022). Naukovo-metodychne zabezpechennia tsyfrovizatsii osvity Ukrainy: stan, problemy, perspektyvy [Scientific and methodological support for the digitalization of education in Ukraine: State, problems, prospects]. Herald of the National Academy of Educational Sciences of Ukraine, 4(2). <https://doi.org/10.37472/v.naes.2022.4223> [Луговий В. І., Кремень В. Г., Биков В. Ю., Ляшенко О. І. та ін. (2022). Науково-методичне забезпечення цифровізації освіти України: стан, проблеми, перспективи. Вісник НАПН України, 4(2).]
6. Prensky, M. (2012). From digital natives to digital wisdom: Hopeful essays for 21st century education. Corwin Press. <https://doi.org/10.4135/9781483387765>
7. Siemens, G. (2005). Connectivism: A learning theory for the digital age, International Journal of Instructional Technology and Distance Learning, 2. [http://www.itdl.org/Journal/Jan\\_05/article01.htm](http://www.itdl.org/Journal/Jan_05/article01.htm)
8. Spitzer, M. (2014). Digital dementia: What we and our children are doing to our minds. Host.
9. Twenge, J. M. (2017). iGen: Why today's super-connected kids are growing up less rebellious, more tolerant, less happy and completely unprepared for adulthood. Atria Books.