

## **RETHINKING UNIVERSITY TEACHING IN THE DIGITAL ERA: EVIDENCE FROM ARMENIAN AND RUSSIAN UNIVERSITIES**

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### **Abstract**

This article examines transformations in university lecturers' pedagogical activity amid the ongoing digitalisation of higher education. Drawing on post-non-classical science methodology, which integrates explanatory and interpretative approaches and treats participants' values, perceptions, and attitudes as valid research data, the study provides both theoretical and empirical justification for the growing centrality of pedagogical knowledge.

The empirical component involved comprehensive diagnostics—including focus groups, observations, and anonymous questionnaires—with over 70 lecturers from Armenian and Russian universities. Three main groups of challenges are identified: (1) designing curricula and educational-methodological support, where 72% feel unprepared to build student-centred digital learning environments; (2) organising students' independent work, hampered by insufficient feedback and counselling; and (3) fostering productive communication with students in digital environments, which remains labor-intensive and institutionally unrecognised.

The conclusion underscores that pedagogical knowledge has become a core component of university lecturers' professional activity in contemporary higher education—a finding with direct implications for policy, institutional practice, and the design of academic development programmes.

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**Keywords:** Digitalisation of higher education, Pedagogical knowledge, University lecturers, Student-centred learning, Digital learning environments, Academic development

## **Introduction**

The rapid transformation of higher education, accelerated by digitalisation and the legacy of the pandemic, presents profound challenges for university teaching and its management (Jughuryan, Mkhitarian, & Avetisyan, 2024; *Basics of Professional Education Management*). Many university lecturers demonstrate a low level of readiness for these changes, owing to insufficiently developed skills for operating in digital educational environments and a lack of so-called “soft skills” – teamwork, creativity, and critical thinking. At a deeper level, they face the need to change the mental models that underpin their professional activity – models shaped by value orientations, attitudes, expectations, and social dispositions that manifest in concrete actions.

Despite substantial institutional investment in technological infrastructure and digital tool training, these efforts have proved insufficient. Post-pandemic teaching remains predominantly lecture-based, with technologies used largely for content transmission rather than pedagogical transformation. As Shirley (2024) argues, the mere incorporation of digital technologies does not guarantee meaningful change in teaching and learning processes. This observation underscores the urgent need to rethink university teaching beyond technological fixes.

A lecturer’s activity is multidimensional, comprising pedagogical (teaching and methodological), educational, research, and organisational-managerial components. Among these, pedagogical activity plays the leading role, integrating the others (Jughuryan & Mkhitarian, 2026; *Methodology of Scientific Research and Scientometrics*). Consequently, understanding how pedagogical activity is being transformed in the digital era is a central problem for higher education research.

**Research gap and contribution.** While a growing body of literature examines digital transformation in higher education, most studies focus on technological adoption, infrastructure, or student outcomes. Far less attention has been paid to the internal, value-laden process by which university lecturers reconfigure their pedagogical activity – including their professional identity, readiness for change, and the practical difficulties they encounter. Moreover, the post-Soviet context of Armenia and Russia, where higher education systems share historical legacies but are undergoing distinct modernisation

trajectories, remains underexplored in international debates. This study addresses that gap by providing empirical evidence on lecturers' value orientations, self-perceived readiness, and actual challenges, grounded in a post-non-classical science methodology.

**Theoretical framework.** Our research is situated within the post-non-classical stage of pedagogical science, where humanistic orientations become the starting point for scientific inquiry, making “research optics more stereoscopic” (Stepin, 2012). From this perspective, participants' values, perceptions, and attitudes are treated not as subjective noise but as valid data for understanding complex educational change. The theoretical framework integrates a functional approach to lecturers' professional activity, distinguishing five core groups of pedagogical tasks identified in prior research at leading Armenian universities:

1. Designing educational programmes in accordance with professional standards.
2. Developing educational and methodological support, including assessment tools.
3. Designing and organising productive independent work for students.
4. Collaborating with other lecturers in the design and implementation of the educational process.
5. Designing one's own professional career and self-education.

In the context of digitalisation, each of these tasks acquires new content, shaped by the need to construct non-linear, student-centred educational processes. Furthermore, entirely new tasks emerge – those related to the lecturer's understanding of the meaning of their activity, professional self-identification, and readiness for collegial and partnership work. Drawing on an extensive review of dissertation research, monographs, internet resources, and the authors' own experience teaching in Armenian, Russian, and European universities (including professional development programmes), we argue that readiness for change is a key determinant of successful pedagogical transformation.

**Empirical approach.** The empirical study was designed to answer three main questions:

- How do university lecturers perceive the necessity of change in the context of digitalisation?
- What value orientations underlie their attitudes towards these changes?

- What specific difficulties do they encounter in realising pedagogical tasks?

The study employed a mixed-qualitative design, comprising: (a) qualitative content analysis of scientific literature to identify documented connections between new digital tasks and pedagogical strategies; (b) thematic coding (based on Strauss & Corbin, 2000, but adapted for the purposes of this study) of semi-structured interviews with lecturers, to capture subjective value orientations; and (c) comprehensive diagnostics, including observation of real-time teaching, focus group discussions with humanitarian expertise of the results, and anonymous self-assessment questionnaires. This design allowed us to establish both lecturers' stated acceptance of change and the difficulties they actually experience.

**Study context and participants.** The study was conducted during the 2025–2026 academic year, in parallel with professional development programmes for teaching staff. A total of 76 lecturers from Armenian and Russian universities participated: 15 from the International Scientific and Educational Centre (ISEC) of the National Academy of Sciences of the Republic of Armenia, 22 from Yerevan State University, 20 and 14 respectively from two St. Petersburg universities (Saint Petersburg State University and Saint Petersburg State University of Industrial Technologies and Design), and 5 from the Public Administration Academy of RA. Focus group discussions were supplemented by participant observation (recording interaction patterns and the value content of assignments) and humanitarian expertise of pedagogical activities – the latter aimed not at verdicts but at collaborative identification of difficulties. An anonymous questionnaire with two blocks (attitudes towards change and self-assessed difficulties) was administered, and responses were analysed using assessment matrices and open-ended commentary. Semi-structured interviews were subsequently conducted to clarify intermediate findings.

The remainder of the article presents the results of this empirical investigation, discusses the three main groups of difficulties identified, and proposes strategic directions for rethinking university teaching in the digital era – with a particular focus on flexible curricula, robust digital educational environments, and reformed professional development programmes.

## **Results and Discussion**

This section presents the main empirical findings, organised around three themes: (1) lecturers' value-normative regulation and self-perceived readiness for change; (2) the specific difficulties encountered in pedagogical

activity; and (3) the relationship between involvement in innovation and readiness to transform practice. Where relevant, findings are discussed in light of contemporary international research.

*Value-normative regulation: between formal acceptance and actual practice*

Focus group discussions revealed two distinct types of value-normative regulation among university lecturers: **ordinary-traditional** (based on routine, habit, and external compliance) and **moral-ethical** (grounded in internalised professional values and a sense of purpose). Although the declared value orientations of digital transformation – such as student-centredness, flexibility, and innovation – were recognised as important and significant by the overwhelming majority, they were perceived largely as *formal* regulators of behaviour rather than as genuine drivers of real pedagogical activity.

A striking finding concerns self-perceived readiness: **more than 90%** of respondents rated themselves as sufficiently or highly ready to implement pedagogical activities under conditions of uncertainty. This optimistic self-assessment, however, did not align with observed behaviour. During the first month of the pandemic-induced shift to distance learning, lecturers raised numerous organisational, psychological, and methodological concerns. While respondents later claimed these difficulties were “overcome fairly quickly”, the initial gap between confidence and competence is noteworthy. This discrepancy echoes recent findings by Naa-Solo Tettey (2025), who reported that 70% of faculty struggle to maintain student engagement in asynchronous courses despite high self-efficacy ratings. It also aligns with the concept of “digital metamorphosis” proposed by Mavrouti and Wagstaffe (2025), which requires not just skills but a fundamental introspection of educators’ values and beliefs about learning technologies.

*Changing perceptions of pedagogical tasks and value orientations*

More than a third (35%) of respondents noted that the number of organisational and controlling tasks in their pedagogical activity had expanded – a change that conflicts with their understanding of the purpose of university education. For 18% of lecturers, university education should orient students towards research activity, not merely practice-oriented skills. Conversely, **almost 45%** believed that, under new conditions, pedagogical activity should give greater attention to student support, autonomy, and professional self-development. This group called for designing variable class content that depends on students’ own goals.

These shifting perceptions were accompanied by changes in value orientations across three dimensions:

<u>Dimension</u>	<u>Reported value orientation</u>
<b>Content-related</b>	Presenting educational material in diverse forms (not only text but also video, visualisations); using “emotional knowledge” (thoughts and feelings captured in interviews, essays, compositions).
<b>Organisational</b>	Ensuring active student participation through individual, group, and collective activities; organizing interactive interaction within student groups; creating conditions for applied, research-based knowledge use.
<b>Controlling</b>	Developing student motivation for self-organisation, self-control, and self-education (e.g., accumulative assessment with peer-review elements); building systematic support and counselling at programme and discipline levels.

This understanding, held by a substantial group of lecturers, represents an effective prerequisite for transforming university education towards individual learning trajectories, competency development through research and project activities, and a shift in the lecturer’s professional role – from a “lecturer” to a “**navigator**” or **tutor** who provides reflection and orientation, enabling the student to become a genuine subject of trial activity across research, management, and cultural practices (Jughuryan & Mkhitaryan, 2025; *Science Organisation and Management*).

*Three groups of difficulties in pedagogical activity*

Comprehensive diagnostics (focus groups, observations, questionnaires, and humanitarian expertise) identified three interconnected clusters of difficulties.

**1. Designing curricula and educational-methodological support**

More than half of the respondents reported a deficit of knowledge and skills for working in the digital information environment (55%). Approximately half (50%) felt unable to develop bachelor’s or master’s programmes and corresponding discipline work programmes. Notably, 70% noted problems in developing control and assessment materials, and 72% were unprepared to design educational-methodological support that builds a student-centred educational process.

The digital transformation has also foregrounded the task of developing electronic training courses and modules. However, many existing e-courses consist only of presentations, lecture materials, and numerous assignments for independent work – without teacher explanations or recommendations. Assessment materials for intermediate certification rarely include necessary clarifications, feedback algorithms, or error commentaries. On distance learning platforms, students receive insufficient information about additional literature and sources that would motivate deeper disciplinary immersion and research.

## **2. Organizing productive independent work for students**

Difficulties here stem from two interrelated sources: lecturers' lack of readiness to implement student-centred processes, and students' underdeveloped general cultural and professional competencies for productive independent work. A supplementary survey of students (conducted by the authors) revealed that:

- 52% cannot independently navigate discipline content, distinguish essential from non-essential, or formulate a request for help.
- 30% are unable to organise their own time, find, and effectively use additional information sources.
- Students consistently reported a lack of feedback, systematic counselling, and algorithmic assistance from lecturers, leading to formal task completion and negative emotions (irritation, disappointment, anxiety).

These findings are consistent with international research on the dual role of digital technology as both facilitator and inhibitor (Fan, 2025), which notes that online environments can lead to de-systematisation, de-centralisation, and de-individualisation of teaching – precisely the problems observed here.

## **3. Organizing productive communication with students**

Communication difficulties became particularly acute during the pandemic. While lecturers have learned to use various electronic platforms, instant messengers, and email, the content of interaction remains problematic. On one hand, lecturers are unprepared to change their pedagogical position and master new interaction technologies; on the other, the system itself has not revised its understanding of what modern university pedagogical activity entails or how its complexity should be assessed.

Productive communication requires the ability to provide counselling and differentiated support based on students' professional interests and needs. This activity is highly labour-intensive and significantly increases the lecturer's academic workload – yet this increase is neither recorded nor compensated

institutionally. As Finnegan and Murphy (2024) argue, lecturer identity in digital contexts is often misaligned with institutional expectations and contract structures, creating a hidden burden.

#### *Exacerbating factors and the risk of professional alienation*

Objective circumstances exacerbate all three groups of difficulties. 95% of respondents cited “lack of time, energy, and bodily resources” and the stressful situation of being involuntarily involved in change. This combination increases the risk of alienation from the very meanings of pedagogical activity – meanings that determine a lecturer’s readiness to facilitate student professional and personal development, autonomy, and identity formation. Such alienation undermines the transition to a personified educational process.

#### *The moderating role of involvement in innovation*

An important connection was identified between participation in innovative processes and readiness to change. Lecturers from Yerevan State University who were actively involved in implemented innovation events showed a qualitatively different profile: they understood the need for change and its essence, adapted more readily, and changed their activities in line with systemic challenges. This manifested as reduced anxiety about difficulties, greater acceptance of working situations, and a proactive stance. This finding supports the ISTE Faculty Standards for Digital Teaching and Learning Competencies (2025), which emphasise that sustained engagement in innovation communities fosters the six key roles (Instructor, Coordinator, Leader, Researcher, Learner, Contributor) necessary for digital transformation.

#### *Summary of discussion*

The results demonstrate that the digital transformation of university teaching is not primarily a technological challenge but a **pedagogical and value-laden** one. Lecturers recognise the need for change and articulate sophisticated value orientations (content-related, organisational, controlling) that would support transformation. However, a profound gap exists between these orientations and actual practice, constrained by insufficient methodological preparation, inadequate institutional support for labour-intensive activities (counselling, feedback, differentiated instruction), and the absence of workload recognition. Overcoming these difficulties requires moving beyond individual lecturer effort towards systemic changes in curriculum design, digital environments, and professional development – as will be elaborated in the Conclusions.

## **Conclusions**

The analysis of difficulties encountered by university lecturers in the context of digital transformation – specifically in curriculum design, organisation of students' independent work, and productive communication in digital environments – points to several interrelated strategic directions for overcoming them. These directions are grounded not only in the empirical findings of this study but also in recent international research on digital pedagogy and institutional change.

**First, moving beyond the traditional “educational pipeline” model.** The findings reveal that rigid curricula and fixed learning trajectories are a primary source of lecturer difficulty, particularly in designing student-centred educational-methodological support (72% of respondents reported being unprepared for this task). To address this, institutions should develop **flexible, modular educational programmes** that enable individualised learning pathways. This includes introducing elective module pools, dynamic scheduling models, and micro-credentials – structural innovations that have gained empirical support in recent initiatives such as Digivisio2030 (2024–2025) and the work of Ciolan (2023) on modular curricula. Such approaches not only support student-centred learning but also require a fundamental reconsideration of academic workload distribution and institutional organisation, including recognition of the labour-intensive counselling and feedback activities that lecturers currently perform without formal acknowledgment.

**Second, strengthening digital educational environments as pedagogical spaces.** Beyond their technological function, digital environments must enable meaningful pedagogical interaction, co-construction of knowledge, continuous feedback, and personalisation of learning processes. Our study found that current e-courses often reduce to repositories of presentations and assignments without explanatory or reflective support. As Polupan (2018) argued, interactive intellectual environments should integrate teaching, learning, and assessment practices. More recent work by Fan (2025) on the dual role of digital technology – as both facilitator and inhibitor – underscores the need for intentional pedagogical design to counteract de-systematisation and de-individualisation. Therefore, developing a comprehensive digital educational environment means prioritising pedagogical affordances over technical features, and ensuring that platforms support rather than undermine lecturer-student relationships.

**Third, transforming professional development systems for academic staff.** Existing training models, which focus predominantly on

digital tool proficiency, have proven insufficient. Our findings show that despite high self-perceived readiness (>90%), lecturers face profound difficulties in designing student-centred materials (72%), developing assessment tools (70%), and organising productive independent work – difficulties rooted in pedagogical knowledge deficits, not technical ones. Consequently, professional development must be reoriented toward **pedagogical knowledge, reflective practice, and value-based understanding of teaching**. The ISTE Faculty Standards for Digital Teaching and Learning Competencies (2025) provide a useful framework, emphasising six roles (Instructor, Coordinator, Leader, Researcher, Learner, Contributor) that integrate technical and pedagogical dimensions. Similarly, Gqoli and colleagues (2025) advocate for blended training combining technical proficiency with pedagogical innovation, grounded in the TPACK framework. Such programmes should include ongoing evaluation and opportunities for lecturers to engage in communities of practice – a factor that, in our study, distinguished more adaptable lecturers (e.g., those involved in innovation events at Yerevan State University) from their less engaged peers.

**Overall contribution and implications.** This study demonstrates that the effectiveness of digital transformation in higher education depends not on the mere adoption of technologies, but on the **reconfiguration of pedagogical activity, professional identity, and value orientations** of university lecturers. The gap between declared value orientations (which are often formal and regulatory) and actual pedagogical practice must be closed through systemic institutional support, not individual effort alone. In this context, **pedagogical knowledge emerges as a core component of academic professionalism** – extending beyond the teaching profession and becoming increasingly relevant in a knowledge-based society characterised by intensive interpersonal interaction, knowledge production, and continuous learning.

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