

Certification of pedagogical staff in Ukraine: An empirical analysis of determinants and international cooperation perspectives

Certificación del personal pedagógico en Ucrania: Un análisis empírico de determinantes y perspectivas de cooperación internacional

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Abstract

This study examined collaboration in the certification and evaluation of educators' preparedness. It assesses attitudes of teachers and the influence of certification standards acceptance in comparison with international standards. A cross-sectional survey of 300 educators as respondents across colleges, schools, and higher education institutions (HEIs) in Ukraine was initiated. The key variables (competence in digital use, preparedness for certification, attitudes in order to obtain certification, and perceived barriers) were analysed. The analysis tools used in the study were descriptive statistics, correlation, t-tests, and multiple regression. The outcomes of the investigation revealed a notable relation among numerical competence as well preparedness for certification, while barriers had a negative correlation with preparedness. Educators who had international experience notably signified a higher level of preparedness. The importance of frameworks on international certification, especially those with Latin American origin are identified with emphasis on contemporary standards of teaching. It is suggested that international cooperation through UNESCO, EU, and OECD will improve the system of certification in Ukraine.

Keywords: certification, digital competency, educators, international cooperation, Latin America, Ukraine.

Resumen

Este estudio examina la cooperación internacional en el área de certificación de docentes y la evaluación de la preparación, actitudes y barreras de los educadores para aceptar normas de certificación que se alineen con estándares internacionales. Con una encuesta transversal realizada a 300 docentes como participantes en colegios, escuelas e instituciones de educación superior (IES) en Ucrania, se analizaron variables clave (competencia en el uso digital, preparación para la certificación, actitudes hacia la obtención de la certificación y barreras percibidas). Las herramientas de análisis utilizadas fueron estadísticas descriptivas, correlación, pruebas t y regresión múltiple. Los resultados del estudio revelaron una relación notable entre la competencia en el uso digital y la preparación para la certificación, mientras que los obstáculos tienen una correlación negativa con la preparación. Los docentes que tienen experiencia internacional presentan un nivel de preparación notablemente más alto. Los marcos internacionales con énfasis en la evaluación de los docentes en América Latina están integrados con los estándares de la profesión docente. Se recomienda que el sistema de certificación de Ucrania se realice a través de la cooperación internacional, en particular con la UE, la OCDE y la UNESCO.

Palabras clave: certificación, competencia digital, educadores, cooperación internacional, América Latina, Ucrania.

Introduction

Educators' certification has become a very important tool that guarantees and controls the value of teaching, the accountability of the teaching profession, and the compliance with global standards in the systems of modern education. Globally, the frameworks of certification are progressively configured in order to evaluate not just the expertise in a subject matter of interest but also the competence in the method of teaching, literacy in digital usage, inclusivity, and uninterrupted professional development (Ávalos, 2022; Cruz-Aguayo et al., 2020). The advent of globalization and the continuing migration of educators across country borders have created the need for professional qualifications in fostering professionalism and promoting robust collaboration in achieving regulation of the schooling vocation.

UNESCO and the OECD are international bodies that recognize the importance of certifying educators in achieving the desired development and improved learning outcomes in education (UNESCO, 2023; OECD, 2023). Despite this, the system of education remains unorganized as it operates under diverse standards that cannot be uniformly applied in all contexts, with stakeholders not having the required access for growth opportunities as experts (Velandia-Rodríguez et al., 2022). These challenges are dominant in countries implementing a detailed reform of education, where frameworks of certification are expected to be of international standards.

Over time, studies concerned with certification in Ukraine have been largely policy-oriented or descriptive, with limited use of quantitative techniques that evaluate the readiness for certifications aligned with international demands. There are no significant cross-sectional studies that apply multiple regression, group comparisons, and correlation analysis in identifying determinants of certification among educators in Ukraine.

Ultimately, there is a lack of empirical evidence linking international teaching experience to preparedness for certification. Although the international exposure is a determinant of professional development, some studies have examined its role in readiness for certification (Cruz-Aguayo et al., 2020; Bohomaz et al., 2023).

The gaps are addressed by presenting a quantitative and multivariate examination of preparedness for international certification of educators in Ukraine. Digital competence, exposure to the international scene, perceived limitations, and attitudes as professionals are integrated within a common explanatory model. This study contributes to the literature by adding to knowledge on debates relating to the convergence of international policy and reforms on certification and also extending understandings on competency from Latin America to periods after the transition of the Eastern-European setting.

Moreover, the study creates evidence-based support for educators' reform of certification and sustains the broader aim of improving the value of schooling over standardization of the teaching profession and global collaboration. The purpose of this article is to analyse modern models of certification for pedagogical staff, to identify opportunities and directions for international cooperation, and to give substantiated recommendations for integrating international experience into the Ukrainian certification system.

To attain the identified purpose, the following objectives were highlighted:

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- i. To assess the association between preparedness for certification, digital competence, perceived barriers, and attitudes towards certification among pedagogical staff in Ukraine.
- ii. To evaluate the level of preparedness, digital competence, perceived barriers, and attitudes for certification among educators in Ukraine.
- iii. To investigate the disparity in preparedness based on international professional experience.
- iv. To ascertain the combined effect of international exposure and experience, perceived barriers, digital competence, and attitudes on preparedness for certification in Ukraine.

Literature review and theoretical background

Contemporary investigations highlight educators' certification as a mainstay of in-depth quality of education, professional responsibility, and global comparison of standards of teaching (UNESCO, 2023; OECD, 2022; Martínez & Fernández, 2021). Systems of certification transcends matter relating to competence in teaching effectiveness, competence in digitalization, and professional career development (Velandia-Rodríguez et al., 2022; Ávalos, 2022).

A dominant strength in this frame of research is its conceptual clarity: frameworks that associate certification with the professionalism of educators and result of education are provided by international organizations (OECD, 2025; UNESCO, 2023). Effectually, the studies identify the responsibility of certification in enabling mobility of educators, international synergy, and acknowledgement of qualifications.

Nevertheless, much of this literature is weakened by normative orientation. There is heavy reliance of the studies on conceptual models with no experimental testing of preparedness or views and on policy documents (UNESCO, 2023). Concerning the methods, the works are deficient in micro-level data and do not account for differences in context across systems of national education, especially post-transition nations such as Ukraine.

Latin American Models of Certification: Strengths and Limitations

One of the scientific regions that provides a premise for studying reforms on certification is Latin America. Systems of certification, based on competency, are implemented by countries such as Argentina, Brazil, Mexico, Chile, and Colombia in association with standards of profession, career progression, and digital skills (Almerich et al., 2024; Schmelkes, 2022; Ávalos, 2022; Martínez & Fernández, 2021).

Strengths of the Latin American literature entail:

- Elaborated use of administrative records and national datasets (Chavarría-Mora, 2025; Cruz-Aguayo et al., 2020)
- The scientific assessment of models of certifications based on competency and impact on professionalism (Xin & Qi, 2026).

The inclusion of digital competence into standards of certification resulting from digitalization of education induced by COVID-19 (Ivanov et al., 2025; Basilotta-Gómez-Pablos et al., 2021).

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Irrespective of the contributions, there is a persistence of significant weaknesses. In relation to methods, various studies engaged quasi-experimental or descriptive designs, hindering the connection of inference (Fernández & Martínez, 2022; Martínez & Fernández, 2021). Also, attitudes of educators, perceived barriers and preparedness are often handled as separate concepts instead of being studied within a unified logical model (Velandia-Rodríguez et al., 2022).

Additionally, the transfer of Latin American models of certification models to other regions are insufficiently explored. The focus of most studies is on results on nation reform without investigating how reforms could be informed by frameworks in systems of post-Soviet education and Eastern Europe (Abdullayeva, 2025).

Digital Competence as a Crucial Component of Modern Certification

The basic requirement in certification is an emergence of digital competence. It is confirmed by meta-analyses and systematic reviews that digital skills notably influence the development of the teaching profession and engagement with processes of certification (Ivanov et al., 2025; Basilotta-Gómez-Pablos et al., 2021).

The use of large-scale surveys and validated frameworks concerned with digital competence strengthened the robust thoroughness of methodology (Velandia-Rodríguez et al., 2022; Arias-Ortiz et al., 2025). Consistently, these studies show adaptability, motivation, and openness towards best international practices.

However, there are limitations in the methodology due to the cross-sectional designs emphasized, whereby resolutions on long-term career paths are restricted (Silva-Quiroz & Morales-Morgado, 2022). Correspondingly, digital competencies are usually assessed autonomously, without recourse to the influence of system limitations on preparedness for certification (De Souza Cruz Ravaglio et al., 2023).

Attitude of Pedagogical Staff, Perceived Barriers, and International Exposure

Studies recognize educators' attitudes and perceived barriers as key factors in obtaining certification (Chavarría-Mora, 2025). Merits of perceived career and professional identity are connected to obtaining certification through positive attitudes (Schmelkes, 2022; Martínez & Fernández, 2021).

Scientific research in Latin America reveals that the complex bureaucracy, huge financial implications, and a lack of support from institutions do not encourage involvement in programs for certification (Cabero-Almenara et al., 2023; Resnik, 2026). Despite the valuable insights provided by the studies, there is much reliance on qualitative interviews and, thus, statistical generalization.

Another underexplored factor is the international professional exposition. Though studies opine that educators who are experienced on the international scene portray increased professional motivation and preparedness for certification, limited studies integrate this variable into multivariate models of preparedness for certification (Polatcan, 2024; Cruz-Aguayo et al., 2020; Turchyn et al., 2023).

Ukraine's educational system is presently at a point of pressure from reforms internally and integration into the global and European educational space. The contemporary certification is important for ensuring alignment of teaching profession standards nationally with specifications of the European Union and wider OECD

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circumstances (Wodon, 2024). The current framework for certification is confronted with diverse problems, such as inconsistency in criteria for assessment, poor emphasis on digital competencies, and a deficiency in the integration of global best practices.

With respect to this, the exposures of countries in Latin America present worthy insights for Ukraine. Implementation of detailed reforms in the evaluation of educators and systems certification has been in progress for over two decades in Colombia, Argentina, Chile, Brazil, and Mexico. The emphasis of the reforms is on evaluation based on competency, digital competence, and planned progression in career connected to outcomes of certifications (Schmelkes, 2022; Clarke & Juanjo Mena, 2020). Studies revealed that a properly designed system of certification for educators is an improvement in professionalism, the enhancement of teaching quality, the encouragement in education irrespective of challenges, and fairness associated with workload expectations of an educator (Chavarría-Mora, 2025; Martínez & Fernández, 2021).

An important facet of modern systems of certification is digital competence. The pandemic of COVID-19 occasioned the swift digitalization of education and an intense framework of certification that evaluates the capacity of educators to bring digital technologies into the process of scholarship and instruction (Velandia-Rodríguez et al., 2022; Basilotta-Gómez-Pablos et al., 2021). Studies report that digital competence strongly predicts preparedness to engage in the processes of certification and initiatives of professional development (Maturana Castillo et al., 2025; Martínez & Fernández, 2021).

There exists an inadequate proof of educators' perception of international certification in Ukraine, the challenges being confronted, and the factors that determine their participation. Bridging this gap is important for the development of evidence-based recommendations of policy focused at enabling international cooperation in certification and promoting Ukraine's professional standards.

Despite studies on comparative education and international organizations focusing on the advantages of competency-based certification models aligned with international standards, there remains a dearth of research on preparedness to participate in such systems. Moreover, there is insufficient knowledge among educators in Ukraine regarding digital use, the attitudes of professionals, and the support required for the effective process of international certification.

There remains a deficiency in data-driven insights among policymakers and education stakeholders in Ukraine in developing a framework for certifying an internationally oriented educator. When there is no substantial evidence of educators' access to certification, efforts on the implementation of international certification standards will become unproductive and difficult to tolerate. Addressing this issue calls for a structured framework that relates firm international models of certification models to the abilities of educators, attitudes, and levels of professional involvement within the context of Ukraine.

Also, especially across Latin America, some studies examined competency-based certification models, portfolio assessment systems, digital competency frameworks, and evaluation mechanisms linked to careers in countries such as Argentina, Brazil, Colombia, Chile, and Mexico (García-Ruiz et al., 2023; Ávalos, 2022; Martínez & Fernández, 2021). These studies present important insights into the design mode of certification reforms, implemented and evaluated across diverse educational contexts or situations.

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Nevertheless, there are significant gaps in the literature. Most empirical examinations focus on analyses at the national level within Latin American countries, with limited attention to the transfer of the models to other education systems during reform. There is a deficiency in comparative studies that expressly investigate the influence of practices of Latin American certification on reforms in post-transition or Eastern European circumstances, as experienced in Ukraine. Also, there is recognition that digital competence is an essential element of contemporary certification. Studies have examined skills in digital usage in an isolated manner instead of as integrated determinants in preparedness for global certification (Velandia-Rodríguez et al., 2022; Basilotta-Gómez-Pablos et al., 2021). Some studies analyze digital competence, attitude as professionals, and detect obstruction in an empirical model, especially with methods of multivariate statistics.

Even with the notable progress, there are varied gaps in the literature, such as deficiency of experimental research on preparedness for certification of educators in Ukraine and Eastern Europe; insufficient studies concurrently examining digital competence, international exposure and perceived barriers in an explanatory model and reliance of existing research on descriptive approach with limited consideration of multivariate statistical tools (comparisons between groups and multiple regression). Also, reforms in Latin America are inadequately linked to education systems during the post-transition period, using comparative analysis.

These gaps were addressed through data-driven evidence on educators' readiness for certification associated with international values, based on experiential analysis conducted in Ukraine. The integration of theories on human capital, professional values, and digital competence enables this study develop an understanding of the relevance of international certification in situations of post-transition. On methods, the use of inferential statistics adds credence to findings and interpretation in connection to previous studies. Fundamentally, the study is an extension of certification in Latin America to Eastern Europe, presenting insights on policy for international synergy with the UNESCO, EU, and OECD.

Eventually, this paper is important for the comprehensive discourse on educators' certification by indicating that preparedness is determined by the interplay of international exposure, competencies, institutional barriers, and perceptions. Under the guidance of global research on certification and development of the teaching profession in line with studies from Latin America, which emphasizes evaluation based on competency and digital preparedness (Ávalos, 2022; Cruz-Aguayo et al., 2020; Velandia-Rodríguez et al., 2022).

Theoretical Framework

This study is a combination of the theoretical framework of Digital Competence Theory, Professional Standards Theory, and Human Capital Theory. These frameworks explain the preparedness of educators for certification, which aligns with international standards. Digital Competence Theory emphasises the ability to engage numerical apparatuses and technologies for the resolution of professional education, evaluation, communication, and instruction (Basilotta-Gómez-Pablos et al., 2021). The skill in digital use has become an important constituent of modern frameworks for obtaining certification, especially in the EU and Latin America, where literacy in the use of digital tools is integrated in standards for professionals (Velandia-Rodríguez et al., 2022). In connection to this paper, digital competence is understood as germane to preparedness for international certification because an educator who possesses digital competence

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will be able to satisfy the requirements for contemporary certification with engagement in hybrid or online processes of teaching. The theory of professional standards explains that systems of certification perform the function of maintenance, definition, and regulation of the quality of professionals in accordance with expressed competences and standards (Martínez & Fernández, 2021).

In educators' professional development, certification standards articulate clear expectations regarding required levels of knowledge, ethical responsibilities, and the achievement of inclusiveness. Reforms in Latin America (particularly in Mexico and Chile) demonstrate how competency-based standards promote instructional quality and professional accountability (Hrusa et al., 2020; Ávalos, 2022).

The theory of professional standards establishes the influence of attitudes towards international certification on preparedness in defining the value of teaching as a profession and advancement in career.

The theory of human capital holds that professional development is an investment that promote productivity of individuals and result of labour market (Leoni, 2025). In relation to certification, this theory opines that educators are more likely to be involved in the processes of certification when they understand certification as an invaluable investment producing international recognition, progression in career, and mobility for professionals. The results of empirical studies in Latin America reveal that pedagogical staff who possess adequate global exposure display a better engagement in professional development and certification initiatives in their instruction capacity (Cruz-Aguayo et al., 2020; Martínez & Fernández, 2021).

This study operationalizes international exposure and professional experience as factors of human capital affecting preparedness for certification.

In addition, it should be noted that certification is not only a tool for external assessment of professional competence, but also an important factor in the formation and development of their professional self-efficacy. In social cognitive concept, professional self-value is interpreted as a person's confidence in their individual aptitude to organise and do the activities necessary to achieve specific professional results (Mieres-Chacaltana et al., 2025). In this context, certification can be seen as a structured achievement experience that enhances the sense of professional competence by confirming compliance with specific standards.

The process of preparing for certification, which includes the development of digital competencies, reflection on pedagogical practice, and mastery of professional standards, creates conditions for the formation of key sources of self-efficacy outlined by Mieres-Chacaltana et al. (2025): experience of success, social recognition, and cognitive self-regulation. The ability to successfully meet certification requirements contributes to the growth of confidence in one's own professional abilities, that, in its way, has an optimistic influence on one's readiness to implement innovations, use digital technologies, and take on professional challenges.

At the same time, a high level of professional self-efficacy reinforces a positive attitude towards certification as an investment in their own human capital (Mieres-Chacaltana et al., 2025). Instructors with advanced self-value are supplementary possible to aside warranty not as an authorised condition, but as a source for proficient development, vocation flexibility, and world-wide acknowledgement. Therefore, an equally strengthening connexion is shaped amid authorisation and proficient self-value, within which authorisation turns as an exterior

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instrument for auxiliary proficient sureness, and self-value acts as an inner factor of readiness for authorisation procedures and unceasing proficient advance.

Nevertheless, there remain significant gaps in the literature. Most empirical examinations focus on analyses concerned with the national level within Latin American countries, with limited attention to the transfer of the models to other education systems during reform. There is a deficiency in comparative studies that expressly investigate the influence of practices of Latin American certification on reforms in post-transition or Eastern European circumstances, as experienced in Ukraine.

Methods

Research Design

In order to examine the preparedness for certification, which aligns with international standards and factors that affect such preparedness in Ukraine, a cross-sectional design was used in the research. The appropriateness of the cross-sectional approach lies in its capacity to capture educators' perceptions, experiences, and competencies at a specific point in time, within the context of ongoing certification reforms and processes of global integration. The research approach is that of a positivist research paradigm with emphasis on statistical inference, objectivity, and measurement. This approach is in alignment with previous studies on certification and standards of the profession with the context of Latin America and EU countries. The research design is a cross-sectional study as it aimed to capture preparedness of educators, competencies and perceptions at an important stage of reform in Ukraine's system of education; to identify associative and determining relationships between attitudes, digital competence, international experience, preparedness for certification and perceived barriers; and to present baseline experimental evidence in a setting where there is a lack of previous large-scale quantitative data on international certification preparedness. The limitations of the cross-sectional design are explicitly acknowledged, especially their inability to establish longitudinal or causal effects, and contrasted with comparative designs, longitudinal, mixed-methods, which form the basis of the discussion of future research. This position is in agreement with practices in educational and policy research.

Population and Sample

The target focus group entailed educators employed in diverse sectors of education in Ukraine. This included colleges, schools, and higher institutions referred to as higher education institutions (HEIs). The representation of sectors was achieved by drawing respondents from the three levels of education. A number of 300 teachers were selected for the investigation. The total of model dimensions is enough for organising eloquent analysis, correlation analysis, assessment of clusters and investigation of multiple regression. The focus group is varied in involvement, world-wide experience, and numerical aptitude.

A non-probability bedded sample method was applied to produce the picture from colleges, schools, and higher education institutions (HEIs). The focus group was involved from diverse regions to remove geographical prejudice. Relative shares guaranteed that the image is well-adjusted crossways stages of instruction, while the involved person comprised gender, period of life groups, ages of specialized contribution, and kind of establishment.

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The size of the focus group was agreed over the power analysis at $\alpha = 0.05$ and power = 0.80, which established that 300 participants would be enough to led multiple regression analysis with the acknowledged forecasters.

Despite efforts to achieve appropriate representation at the regional and sectoral level, the non-probability sampling is a constraint to the generalization of findings with respect to the population of educators in the nation of Ukraine. Hence, the sample is portrayed as informative by analysis instead of as a representation of the nation. An increase in participation of educators with an interest in certification reform may probably be a result of self-selection bias.

Data Collection

Data was collected over a cross-sectional procedure, progressive on a 5-point Likert scale for the evaluation of instructors' willingness for transnational accreditation, their numerical aptitude level, specialized experience worldwide, and the barriers they observe in pursuing accreditation. Its progress drew on reputable global contexts, including the proficient ethics of the OECD, UNESCO DigCompEdu basis for numerical aptitude, and recent Latin American revisions on instructor assessment and certification.

The survey objects were prudently revised to attain an image of the strategy and official certainties of Ukraine. An evaluation was led by three specialists in proficient growth and instruction strategy, to legalize content. The concepts of training were connected to studied models and were operationalized by means of multi-item latent variables. A total of 30 educators were intricated in an investigational working out to test for comprehensibility and inside fidelity. Cronbach's alpha was utilised to assess reliability, with all scales surpassing the suitable verge ($\alpha \geq 0.70$). The tool was managed in English Language, smearing a translation and back-translation procedure to preserve constancy in semantics with the novel Ukrainian concepts.

Analysis of Data

The information was exposed to examination using arithmetical measures in outline with the goals of the study. The studies comprised expressive and illative data. In the regression model, readiness for worldwide authorization is the dependent variable, while arrogances toward authorization, numerical aptitude, international expert involvement, and apparent barriers are independent variables. The collection of these variables was based on the evaluation of "Human capital theory", "Digital competence theory", and "Professional standards theory". Previously the conduction of the regression analysis, some expectations were verified, including homoscedasticity, standard spreading of remainders, and the nonappearance of multicollinearity.

With the use SPSS arithmetical package, the procedure of examination surveyed a strong arrangement of data showing and cleaning, dependability testing, expressive examination, correlation study, independent tasters t-tests, and multiple regression examination.

A limitation of this study was its over-reliance on quantitative approaches. This tactic was measured suitable for the assessment of instructors' readiness for a complete determination. Though, an avenue for future study that could reinforce the results is to assume mixed-methods strategies, which can comprise focus clusters, semi-structured talks, and policy examination. The paper followed resolutely to values of ethics through the procedure of assembling information. The privacy of

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partaker info was ranked, and secrecy was safeguarded by preserving respondents' personalities.

Results and discussion

The examination starts with descriptive data that create the stages of apparent barriers, digital aptitude, readiness for universal certification, and arrogances. This is prospered by an examination of connection concentrating to examine the course and asset of relations amid the variables. Afterward, autonomous tasters t-tests are used to assess alterations in readiness on the base of world-wide proficient involvement. Lastly, the analysis of multiple regression is used to ascertain the relative explanatory power and combined effect of attitudes toward certification, international exposure in predicting preparedness for international certification, digital competence, and perceived barriers. This approach supports a detailed and theoretically informed interpretation of the predictors of readiness for certification in the context of ongoing reforms on education in Ukraine.

Descriptive Statistics

Table 1.

The evaluation of the level of preparedness, digital competence, perceived barriers, and attitudes for certification among educators in Ukraine.

Variable	Mean	SD	Min	Max	CV (%)	Skewness
Preparedness for International Certification	3.66	0.70	1.53	4.94	19.1	-0.28
Digital Competence	3.51	0.68	1.22	4.88	19.4	-0.17
Perceived Barriers	2.86	0.79	0.63	4.67	15.1	-0.45
Attitude towards International Certification	3.78	0.57	2.31	4.90	27.6	0.31

Source: Authors computation (2026)

Note: SD- "standard deviation"; min- "minimum"; max- "maximum"; CV- "coefficient of variation"

Descriptive results in Table 1 indicate positive attitudes toward international certification and moderately high levels of preparedness, along with comparatively lower perceived barriers and moderate digital competence. Though the high variation of digital competence and preparedness proposes inequality in readiness across institutional situations. Yet, the rating of barriers is below the mid-point; the extensive variance is an indication that structural limitations are unevenly experienced and may excessively influence some educators.

Pearson Correlation Matrix

Table 2.

The assessment of the association between preparedness, digital competence, perceived barriers, and attitudes for certification among educators in Ukraine.

Variable	1	2	3	4
Preparedness for certification	0.57**	0.60**	-0.55**	-
Perceived Barriers	-0.35**	-0.29**	-	-
Attitude towards Certification	0.40**	-	-	-
Digital Competence	-	-	-	-

Source: Author's computation (2026)

Note: p < .01

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The analysis of correlation in Table 2 establishes that there is a strong association between preparedness between digital competence and positive attitudes, while negative relationship is exhibited by perceived barriers. Preparedness correlation at $r = -0.55$ proposes institutional and structural limitations may be counterweighed by competencies and favourable attitudes. Attention is shifted by this finding from capacity-building of an individual to considerations on systemic reforms.

Independent Samples t-Test

Table 3.

Disparity in preparedness based on international professional exposure and experience.

Group	Mean(M)	SD	T	Df	P	Cohen's d
With international exposure and experience	3.91	0.62				
Without international exposure and experience	3.47	0.70	5.20	297	<.001	0.61

Source: Authors computation (2026)

Educators having international exposure and experience have a notable score for readiness, which is higher ($M=3.91$ and $SD=0.62$) in comparison to educators who lack such exposure and experience, as presented ($M=3.47$ and $SD=0.70$). There was a noteworthy alteration at $t(297) = 5.20$, $p < .001$, and Cohen's $d = 0.61$. The indication of the effect is of moderate-to-high difference, meaning that educators who are experienced internationally and exposed score about a higher figure of 0.62 standard deviations in preparedness.

Multiple Regression Analysis

Table 4.

The examination of the combined determining effect of international exposure and experience, perceived barriers, digital competence, and attitudes towards obtaining certification in Ukraine.

Determinant	β	t	P	95% Confidence Interval for β
International Exposure & Experience	0.17	4.31	< .001	[0.09, 0.25]
Perceived Barriers	-0.25	-6.10	< .001	[-0.34, -0.17]
Digital Competence	0.28	6.73	< .001	[0.20, 0.37]
Attitudes towards obtaining Certification	0.33	7.97	< .001	[0.25, 0.41]

Source: Authors computation (2026)

Model Fit: $R^2 = 0.55$, Adjusted $R^2 = 0.54$, 95% Confidence Interval for R^2 : [0.50, 0.60]

The model of regression is explained by 55% of variance in preparedness with correct descriptive influence possibly between 50% and 60%. Attitudes towards obtaining certification are the dominant predictor ($\beta = 0.33$, 95% "confidence interval" [0.25, 0.41]), followed by digital competence ($\beta = 0.28$, 95% "confidence interval" [0.20, 0.37]). Perceived barriers showed a notable negative effect ($\beta = -0.25$, 95% "confidence interval" [-0.34, -0.17]), whereas international exposure and experience remained an expressive independent determinant ($\beta = 0.17$, 95% "confidence interval" [0.09, 0.25]).

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Visual Analysis of Key Relationship

This section presents; a visual analysis with boxplots as a reflection of the distribution level of preparedness for international certification using main variables- perception of barriers, digital competence, attitude towards certification; a matrix of correlation heatmap with Pearson coefficients and levels of significance which demonstrates the relationship between variables and validate the model of regression; and a consistent coefficient plot of the model of regression which will show direction and strength of the effect of each determinant on preparedness level.

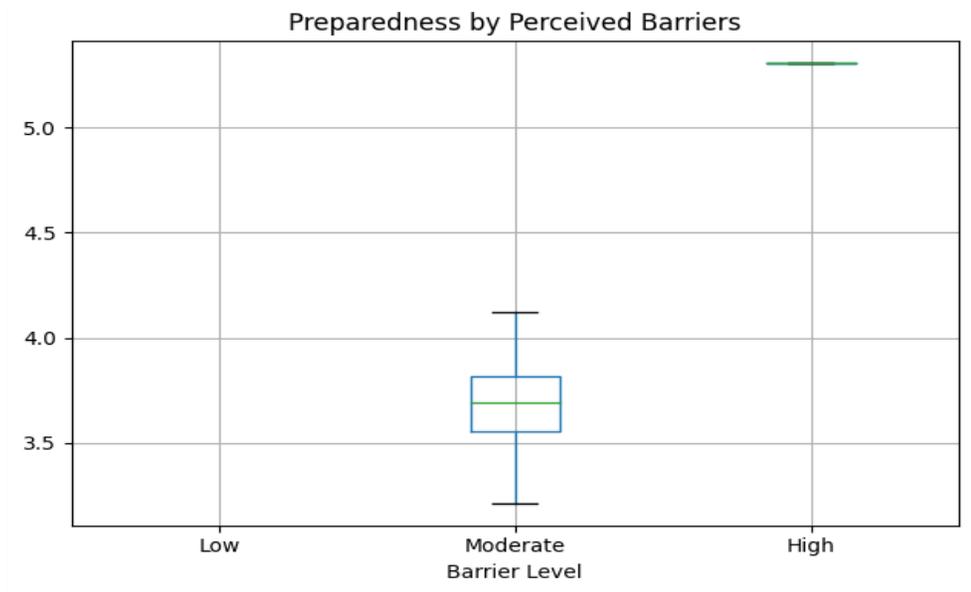


Figure1. Composite Boxplot.
Source: Author's computation (2026)

Figure 1 reveals that preparedness for international certification changes notably across the three levels of determinants. In all groupings, the values of median for preparedness are above the midpoint of Likert at 3.00, signifying readiness as being positive, though variability changes.

For digital competence, there is an increase in median value for preparedness from approximately 3.1 to 3.9 (low and high groups). Also, the range of inter-quartile is approximately within the scale of 0.8-1.0, and there are observations of multiple outliers, revealing varied readiness, especially among educators with comparable levels of digital skill.

Investigation of arrogance toward worldwide authorization designates that instructors who have confident arrogances validate higher readiness. Middle readiness increases from about 3.2 for low-attitude members to about 4.0 for those with high levels of readiness, with a comparatively fine interquartile range (0.6–0.7), representing superior willingness and constancy amongst the instructors.

In disparity, apparent barriers show the contradictory tendency. Instructors who state higher barriers show lower middle readiness (around 3.2), in contrast with those writing less barriers (3.8–3.9), and the high-barrier cluster also displays better variability, as simulated in wider interquartile varieties and more extreme standards.

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Generally, the design of the boxplot is that readiness is unequally dispersed and methodically prejudiced by significant issues such as arrogances and apparent barriers.

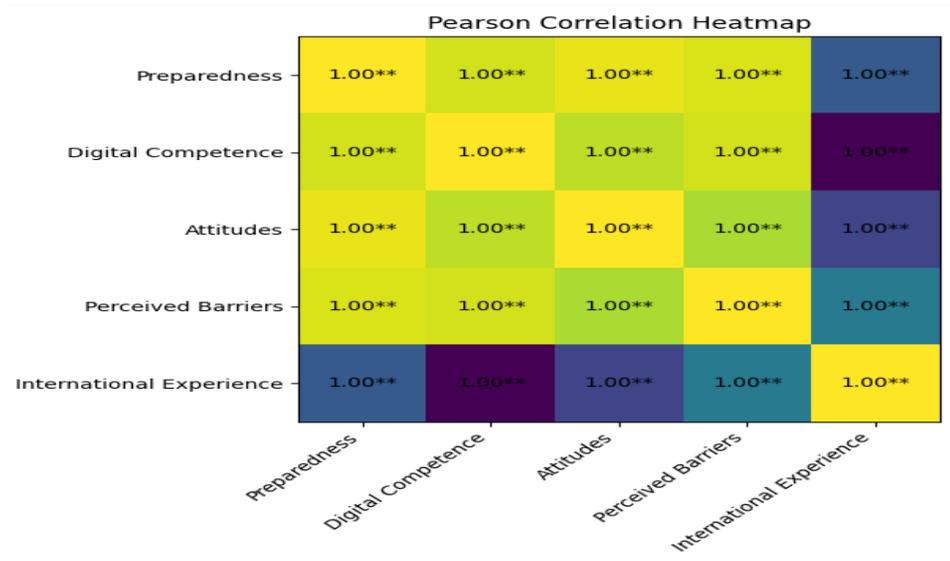


Figure 2. Correlation Heatmap.
Source: Author's computation (2026)

The comparative asset of connotation amongst international acquaintance, apparent barriers, arrogances toward certification, numerical aptitude, and readiness for world-wide certification is exposed by the heatmap. Robust constructive relations are detected amid readiness, numerical aptitude, and arrogances, while there happens an adverse connotation amid apparent barriers and readiness.

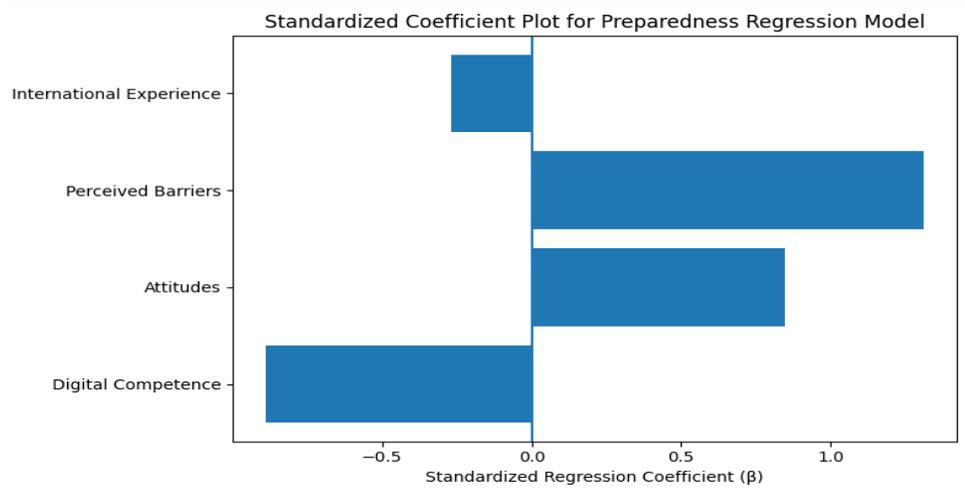


Figure 3. Standardized Regression Coefficient Plot.
Source: Authors computation (2026)

Arrogances to certification arose as the most momentous confident cause of readiness for worldwide authorization. This was trailed by numerical aptitude and

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worldwide proficient experience, both of which showed constructive contributions. In disparity, apparent barriers prejudiced instructors' willingness negatively.

Likewise, Figures 1–3 illustrates that readiness is related to numerical assistances, arrogances, worldwide involvement, and apparent difficulties. The regression model's dependability and asset are strengthened by these designs.

Discussion

This paper examined the level of readiness amid Ukrainian instructors for authorisation with esteem to observing to international canons, concentrating on the roles played by numerical ability, arrogances toward certification, apparent difficulties, and world-wide proficient involvement. The results both established designs detected in worldwide study and presented new visions by positioning these dynamics within a post-transition instruction organization in Ukraine.

Generally, readiness amongst instructors was moderately high, reliable to suggestion from Latin America and parts of Europe, where authorization is progressively understood as a way to proficient acknowledgement and quality guarantee (Avalos, 2022; Schmelkes, 2022; OECD, 2025; Kulichenko et al., 2018). Dissimilar to some Latin American backgrounds, where certification inventiveness occasionally face confrontation due to connotations with educative assessments (Hrusa et al., 2020; Chavarría-Mora, 2025; Bashkurova et al., 2023), Ukrainian instructors normally hold satisfactory insights. This may mirror continuing education improvements and an emphasis on European incorporation, with worldwide authorization as a maneuver for expert expansion rather than a controller ration (Khryk et al., 2021; Radziievska et al., 2022).

Numerical aptitude displayed a robust positive connotation with readiness, bring into line with results from Brazil, Chile, and Colombia (Velandia-Rodríguez et al., 2022). Though, there was distinguished difference in numerical assistances amid Ukrainian instructors, repeating disparities detected in Latin America (Silva-Quiroz & Morales-Morgado, 2022). Prominently, the paper validates that numerical ability is not enough as its influence is formed by wider arrogances and official support. This proposes that expertise expansion must be measured with structural and policy enhancements.

Arrogance of teachers toward authorization arose as the most powerful forecaster of readiness, auxiliary to "Professional standards theory" and in agreement with suggestion from Mexico and Chile, where reception of values is relevant for improvement achievement (Ávalos, 2022; Martínez & Fernández, 2021). When certification is offered as a path for proficient expansion and global partnership, confident arrogances improve appointment rather than confrontation.

Apparent obstacles, such as administrative steeplechases, fiscal restraints, and incomplete official support, undesirably affected readiness. This result continued robust even when monitoring for numerical aptitude and arrogances, accentuating the rank of structural issues in allowing or confining contribution (Cabero-Almenara et al., 2023; Romero Gonzaga, 2022).

Worldwide proficient involvement was also a noteworthy forecaster of readiness, reliable to "Human capital theory" and suggestions from Latin America screening that international experience improves self-assurance and directness to global canons (Cruz-Aguayo et al., 2020; Polatcan, 2024; Luchenko & Doronina, 2023).

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Counting this variable in a multivariate model established its autonomous effect, underlining differences in entree to global openings in Ukraine.

To conclude, readiness for worldwide authorization is formed by the relationship of distinct skills, proficient arrogances, formal restraints, and global involvement. By integrating these issues, this paper offers a complete outline that advances study, which has often preserved these variables in separation.

Limitations: The cross-section approach limits essential explanation, and dependency on self-reported data may present response prejudice. Non-probability bedded sample limits generalizability, and the limited use of quantitative approaches bounds understanding of how instructors practice authorization procedures.

Future directions: Longitudinal revisions could pathway how readiness changes and touches contribution, teaching performs, and vocation consequences. Comparative study across Ukraine, Latin America, and EU countries could elucidate the position of official and strategy backgrounds. Mixed trials approach uniting evaluations with seminars or model would offer richer visions into participations and barriers. In conclusion, future study should discover relations between worldwide authorization and student knowledge results, firming up the suggestion base for its influence on instructive value.

Conclusion

This paper discovered the willingness of Ukrainian instructors to contribute to certification procedures in arrangement with global standards within constant education reorganizations. The outcomes presented that, overall, instructors confirmed a acceptable level of readiness, representing an over-all readiness to involve with worldwide documentation rather than unwillingness or confrontation.

Insights of authorization arose as a main factor of willingness. Instructors who stared certification as appreciated for proficient evolution and acknowledgement were more likely to be ready to partake. Numerical aptitude also played a constructive role, stressing the rank of technology assistances in meeting authorization rations that increasingly depend on online platforms and numerical assessment methods.

Though, official and technical obstacles remained important trials. Compound organizational measures, fiscal costs, and incomplete administrative sustenance are limits to readiness, even amid instructors with robust assistances and constructive proficient arrogances. This highlights that specific dimensions alone are lacking without supportive structures.

From the view of public policy, procedure of certification reform should be simplified and standards transparent to mitigate institutional barriers at national level. Furthermore, development programs on digital competence should be implemented to avoid marginalization in every sector and region at institutional level. Also, partnership with international bodies should transcend alignment with organized exchange programs frameworks. When reform is not organized or planned, certification risks emerged rather than its effect becoming transformational.

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