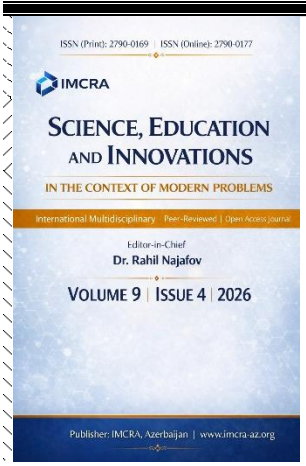

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RESEARCH ARTICLE

Ensuring Policy Coherence and Competency-Based Alignment in Pedagogical Education: A Systematic Analysis of Minimum Educational Requirements and 21st-Century Skills Development in Azerbaijan

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Abstract

The quality and effectiveness of national education systems are fundamentally determined by the competence, preparedness, and professional capacity of teachers. In this context, the present study provides a comprehensive and systematic analysis of the implementation of minimum requirements for the content and level of pedagogical education in the Republic of Azerbaijan, with a particular focus on policy coherence, competency-based education, and alignment with internationally recognized frameworks of 21st-century skills. Drawing upon the strategic priorities outlined in the State Strategy for the Development of Education, the study investigates the extent to which national educational policies—especially those related to higher pedagogical education—are translated into coherent, continuous, and outcome-oriented implementation practices. The research is based on a multi-method approach, combining the analysis of legal and normative documents, statistical data related to teacher recruitment outcomes, curriculum and syllabus evaluation, and comparative assessment of institutional practices in teacher training programs. The findings reveal significant inconsistencies and fragmentation in the alignment of policy documents across different levels and stages of education. While national legislation and strategic frameworks articulate comprehensive and ambitious objectives regarding competency development, their operationalization within curricula and institutional practices remains uneven and, in some cases, insufficiently structured. In particular, the study identifies gaps in the continuity and progression of competencies, limited integration of theory and practice in teacher education, and inadequate emphasis on outcome-based curriculum design. Furthermore, the study situates these findings within the broader context of global educational transformations, highlighting the increasing importance of 21st-century competencies such as critical thinking, problem-solving, collaboration, digital literacy, and adaptability. By drawing on international frameworks developed by UNESCO, OECD, and the United Nations Economic Commission for Europe, the research emphasizes the necessity of aligning national pedagogical education systems with global standards to enhance educational quality and sustainability. The study concludes that achieving high-quality pedagogical education requires a systemic and integrated approach, ensuring vertical and horizontal coherence among policy documents, strengthening competency-based curriculum frameworks, and fostering stronger connections between theoretical preparation and practical teaching experience. The findings offer evidence-based recommendations for policymakers, curriculum developers, and higher education institutions aimed at improving teacher training systems and supporting the development of future-ready educators capable of addressing complex societal and educational challenges.

Citation

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"The quality of an education system cannot exceed the quality of its teachers."
— McKinsey

Introduction

The strategic goal of forming highly competent educators—capable of ensuring the effective acquisition of educational content through innovative teaching methods and technologies tailored to learners' individual characteristics—has defined clear responsibilities for pedagogical education.

By Order No. 913 of the Ministry of Education of the Republic of Azerbaijan dated August 22, 2014, the State Standard for Higher Education and the minimum requirements for the content and level of education across various bachelor-level specialties were officially approved.

To assess the implementation of these minimum requirements, comprehensive and multifaceted research was conducted. One such analysis focused on the performance indicators of graduates from higher education institutions between 2013 and 2017 in the 2017 teacher recruitment examination.

Additionally, a wide range of legal and normative documents were examined, including:

- The Law of the Republic of Azerbaijan on Education
- The State Strategy for the Development of Education and its Action Plan
- The Concept and Strategy for Continuous Pedagogical Education and Teacher Training
- State standards and programs for higher and general education
- Bachelor-level educational programs (Primary School Teaching specialization)
- Regulations governing the organization of bachelor education
- Rules for credit-based teaching at bachelor's and master's levels
- Regulations on accreditation and attestation of higher and secondary vocational institutions
- The Unified Tariff-Qualification Reference Book for education sector positions
- The Code of Ethical Conduct for Teachers

These documents were analyzed to evaluate various aspects of pedagogical education organization. Particular attention was given to issues related to teacher training and teacher identity emphasized in these documents, and educational programs were assessed against these standards. The current situation was further interpreted in light of findings from relevant scientific literature.

Furthermore, the study revisited the problems identified in the *Final Report* of international consultant Rob McBride (2002), who conducted research within the framework of the "Pedagogical Education, Professional Development, and Retraining" component of the Education Reform Program.

The analysis revealed that among 15,427 graduates from pedagogical higher education institutions who participated in teacher recruitment examinations conducted by the Ministry of Education over a five-year period, only 2,589 individuals (17.5%) scored 48 points or higher. While 9,495 candidates (65.36%) achieved scores of 36 or above, a significant majority (82.85%) scored below 48, and 34.64% scored below 36.

These results indicate that the majority of graduates aspiring to become teachers failed to meet the minimum content and level requirements established by the Ministry of Education.

This finding strongly suggests that reforms in the organization and planning of pedagogical education content and technologies in higher education institutions must be accelerated.

Research Objective

The primary objective of this study is to identify the factors that hinder the effective implementation of minimum requirements for the content and level of pedagogical education.

Methodology

The research was conducted in two interconnected directions:

1. National-Level Analysis: Examination of the implementation potential of legal and normative requirements related to teacher training and pedagogical education, including analysis of curricula and the continuity, coherence, and progression of educational plans.

2. Competency Alignment Analysis: Evaluation of the compatibility between 21st-century competencies and national documents directly or indirectly related to pedagogical education.

Research Methods

- Desk Research: Analysis and synthesis of legal documents and scientific literature
- Quantitative Research: Surveys and statistical data analysis
- Practical Experimentation: Development of training materials for outcome-based syllabus design and delivery of training sessions to 19 instructors at the Azerbaijan State Pedagogical University
- Additional Methods: Case study analysis, analytical induction, and targeted interviews

Discussion and Analysis

According to UNESCO (1991), the future development of political, social, cultural, and economic sectors depends on the current level of education systems. The quality of education in any country is fundamentally determined by the quality of its teaching workforce. Therefore, improving teacher education quality can lead to significant advancements in teaching and learning outcomes (UNESCO, 2013).

In Azerbaijan, enhancing the quality of pedagogical education has remained a central issue throughout all stages of educational reform. As early as 2002, Rob McBride identified several key problem areas:

A. Organization of Pedagogical Education Programs

- Overemphasis on theoretical subject knowledge
- Greater focus on psychological and methodological theory rather than school-based research
- Insufficient attention to practical teaching experience in schools

B. Academic Staff Capacity

- Lack of specialists capable of implementing innovations
- Limited engagement of university staff in school-based research
- Weak collaboration between higher education institutions and schools

C. Institutional Linkages

- Insufficient evidence of systematic research conducted in schools by university staff
- Limited awareness among teacher educators of real classroom conditions

Conclusion Perspective

The study highlights the necessity of evaluating how far previously identified deficiencies have been addressed and whether current reforms in pedagogical education meet modern requirements.

It raises critical questions:

- To what extent do reforms align with contemporary teacher training needs?
- What competencies should a 21st-century citizen possess?
- What skills must educators have to develop individuals capable of contributing to both personal and societal well-being?

To address these questions, legal and normative documents shaping pedagogical education policy were systematically analyzed, focusing on coherence, continuity, and alignment of quality indicators across documents.

Discussion and Analytical Framework

The analysis of national education policy documents reveals that the transformation of general educational principles into coherent and operational implementation frameworks remains a significant challenge. As reflected in the comparative assessment of policy documents, it is difficult to conclude that the "general requirements for the content and organization of education," as established in the Law on Education of the Republic of Azerbaijan, are consistently translated into structured, progressive, and interconnected implementation plans across different educational levels .

Instead, the alignment between policy intentions and their practical realization often appears fragmented, inconsistent, and, in some cases, chaotic. Certain competencies and educational objectives are partially reflected in one document while being inconsistently or superficially addressed in others. For instance, a competency such as *collegial decision-making* is not systematically developed across educational stages. Rather than being progressively refined and adapted to different levels, it is represented in fragmented forms, such as "understanding one's role in a process," "working in a team," or "collaborating with colleagues," which fail to preserve or expand the conceptual integrity of the original competency .

This lack of continuity and progression indicates that policy intentions are not always transformed into a coherent developmental trajectory. In some cases, national-level policy objectives are directly replicated at different educational levels without appropriate adaptation, leading to redundancy rather than progression. Such inconsistencies undermine the effectiveness of competency-based education and limit the potential for systematic skill development.

From a systemic perspective, effective educational quality assurance requires horizontal and vertical coherence—that is, alignment across systems, levels, and stages of education. The absence of such coherence negatively impacts the realization of educational competencies and overall learning outcomes. As emphasized in international education policy literature, structured and integrated planning is essential for ensuring educational quality and sustainability (Hadad & Demsky, 1995; UNESCO, 2013).

The findings of this study reveal significant structural and conceptual challenges in the implementation of competency-based pedagogical education in Azerbaijan. While national policy documents formally adopt modern educational paradigms aligned with 21st-century competencies, their translation into curriculum design, minimum requirements, and institutional practices remains inconsistent and fragmented.

One of the most critical issues identified is the gap between policy intentions and their practical implementation. Although strategic documents articulate comprehensive goals related to competency development, these objectives are not systematically operationalized across educational levels. This finding is consistent with broader international research indicating that the effectiveness of educational reforms depends not only on policy design but also on implementation coherence (e.g., UNESCO; OECD).

The observed fragmentation—manifested in inconsistent representation of competencies across documents and levels—suggests a lack of both **vertical coherence** (alignment across educational stages) and **horizontal coherence** (alignment across systems and institutions). As a result, competencies are not developed progressively but rather appear sporadically and without a clear developmental trajectory.

Another important issue concerns the excessive specificity of minimum requirements. While detailed formulations may aim to ensure clarity, the findings demonstrate that over-specification leads to redundancy, duplication, and reduced flexibility in curriculum implementation.

Instead of supporting competency development, highly fragmented and subject-specific requirements hinder the possibility of interdisciplinary integration and adaptive teaching practices. In contrast, international best practices emphasize the importance of generalizable, transferable competencies that can be applied across different contexts (e.g., Tony Wagner, 2010).

The tension between specificity and generalization identified in this study highlights the need for a balanced approach, where minimum requirements are sufficiently clear yet flexible enough to support innovation and contextual adaptation.

The study confirms a persistent imbalance between theoretical knowledge and practical skill development in teacher education programs. The dominance of theoretical courses and the limited allocation of credits to practical components indicate a structural bias toward academic knowledge rather than professional competence.

This finding aligns with earlier critiques of teacher education systems, including those of Linda Darling-Hammond, who emphasizes the importance of integrating theory with practice to ensure effective teacher preparation.

Moreover, the limited duration and late placement of teaching practice reduce opportunities for experiential learning. International models increasingly advocate for early and continuous school-based experience, allowing future teachers to develop professional competencies in authentic contexts.

The analysis of course syllabi reveals significant weaknesses in outcome-based planning. In many cases, learning outcomes are either absent or insufficiently aligned with minimum requirements and competency frameworks. This suggests that the principles of outcome-based education, although formally adopted, are not effectively implemented at the institutional level.

Such deficiencies can be attributed to both structural and capacity-related factors. On the one hand, the lack of clear mapping between competencies and minimum requirements creates ambiguity. On the other hand, instructors may lack the necessary expertise in designing outcome-based curricula.

The positive results of the training intervention indicate that targeted professional development can significantly improve instructors' competencies in this area. This finding underscores the importance of continuous capacity building as a key component of educational reform.

Despite the increasing emphasis on 21st-century competencies in global educational discourse, their integration into both higher education and primary education frameworks remains limited. Critical competencies such as self-regulation, metacognitive skills, and environmental awareness are either underrepresented or entirely absent.

This lack of integration is particularly problematic at the primary education level, where foundational competencies should be developed. As highlighted in the work of UNICEF and other international organizations, early education plays a crucial role in shaping lifelong learning capacities.

The overrepresentation of work-related or procedural skills, combined with the underrepresentation of higher-order cognitive and socio-emotional competencies, indicates an imbalance that may limit students' ability to adapt to complex and dynamic environments.

The findings of this study have important implications for educational policy and practice. First, there is a need to move beyond formal adoption of competency-based frameworks toward their meaningful and coherent implementation. This requires a systemic approach that ensures alignment across policy documents, curricula, and classroom practices.

Second, the simplification and generalization of minimum requirements could enhance flexibility and support more effective curriculum design. Third, the integration of teaching practice throughout the entire duration of teacher education programs is essential for bridging the gap between theory and practice.

Finally, strengthening institutional capacity through professional development and training initiatives is critical for ensuring the successful implementation of outcome-based education.

This study contributes to the existing literature by providing a system-level analysis of competency alignment in pedagogical education within a transitional educational context. Unlike many studies that focus on individual aspects of curriculum design, this research integrates policy analysis, curriculum evaluation, and empirical data to offer a comprehensive perspective.

Furthermore, the study highlights the importance of coherence and alignment as key dimensions of educational quality, extending existing frameworks on competency-based education and teacher training.

Despite its contributions, the study has several limitations. The analysis is primarily based on document review and institutional data, which may not fully capture classroom-level practices. Future research could incorporate observational and longitudinal methods to examine how competencies are developed in real teaching contexts.

Additionally, comparative studies involving other countries or educational systems could provide further insights into best practices and alternative models of competency-based teacher education.

Table 1. Policy Coherence Analysis of Educational Content and Competency Development

Policy Level / Document	Stated Objective / Competency	Observed Implementation Across Documents	Identified Issue	Implication for Educational Quality
Law on Education	General competencies (e.g., collaboration, decision-making)	Broad and abstract formulation	Lack of operationalization	Weak translation into practice
State Strategy for Education	Quality assurance and competency development	Partially reflected in action plans	Fragmentation and inconsistency	Limited systemic impact

Curriculum Documents	Skills and learning outcomes	Inconsistent representation across levels	Lack of continuity and progression	Reduced competency development
Institutional Programs	Practical implementation	Fragmented and sometimes redundant	Misalignment with national standards	Inefficient teacher preparation
Teacher Training Programs	Professional competencies	Insufficient integration of theory and practice	Weak linkage between policy and classroom reality	Low effectiveness of teacher training

Strategic Policy Implications

The Action Plan for the implementation of the State Strategy for the Development of Education identifies critical priorities, including:

- The development of quality standards and indicators across all educational levels
- The establishment of a National Qualifications Framework for lifelong learning

These initiatives are essential for addressing systemic gaps and ensuring coherence in educational policy implementation. Without such frameworks, the education system risks maintaining fragmented structures that fail to support long-term competency development.

The Role of Changing Global Contexts

As the nature of work continues to evolve, so do the competencies required for successful participation in society and the labor market (McLaughlin, 1995). Education systems must therefore adopt a forward-looking approach, preparing learners not only for current realities but also for future challenges.

Global scientific and technological advancements, alongside socio-political and cultural transformations, necessitate a re-evaluation of educational priorities (UNESCO, 1991). Education is increasingly expected to equip individuals with adaptive, transferable, and lifelong learning skills.

21st-Century Competencies: Conceptual Frameworks

The concept of *21st-century competencies* has gained prominence since the late 20th century and encompasses a broad range of cognitive, social, emotional, and personal skills. These include:

- Critical thinking and problem-solving
- Collaboration and teamwork
- Effective communication
- Creativity and innovation
- Digital literacy
- Ethical and social responsibility

(Boyce et al., 2001; Voogt & Roblin, 2012)

One of the most influential frameworks was developed by the UNESCO International Commission on Education for the Twenty-First Century (Delors, 1996), which identified four fundamental pillars of learning:

1. Learning to know
2. Learning to do
3. Learning to be
4. Learning to live together

These pillars provide a holistic model integrating knowledge, skills, values, and competencies necessary for sustainable development.

Contemporary Competency Models

Research conducted by Harvard University's Change Leadership Group further expands this framework. According to Tony Wagner (2010), seven core competencies are essential for success in the modern world:

- Critical thinking and problem-solving
- Collaboration and leadership
- Agility and adaptability
- Initiative and entrepreneurship
- Effective communication
- Accessing and analyzing information
- Curiosity and imagination

These competencies are supported by extensive empirical research and reflect the evolving demands of global education systems.

Similarly, McLoughlin and Lee (2008) emphasize personalization, collaboration, communication, informal learning, and productivity as key elements of future education. These perspectives align with broader international frameworks, including those developed by OECD, P21, and UNECE.

Sustainable Development and Competency Integration

The framework adopted by the United Nations Economic Commission for Europe (2011) for Education for Sustainable Development provides a multidimensional model of competencies structured across:

- Learning domains (knowledge, skills, values)
- Developmental stages
- Transformational capacities (holistic thinking, future-oriented vision, and change implementation)

This model builds upon the Delors framework and emphasizes the integration of sustainability into educational systems.

Table 2. Alignment of Educational Policy Documents with Competency Requirements

Policy / Document	Learning to Know	Learning to Do	Learning to Be	Learning to Live Together	Critical Thinking	Collaboration	Communication	Problem Solving	Digital Literacy	Creativity	Ethical Values	Overall Coverage (%)
Law on Education of the Republic of Azerbaijan	✓	✓	✓	✓	✓	–	–	–	–	–	✓	35%
State Strategy for the Development of Education	✓	✓	–	✓	✓	✓	–	✓	–	–	✓	45%
Action Plan for the Implementation of the State Strategy	✓	✓	✓	✓	✓	✓	✓	✓	–	–	✓	60%
Concept and Strategy of Continuous Pedagogical Education	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	85%
State Standards and Educational Programs	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	✓	75%

(Higher Education)												
Bachelor-Level Curriculum (Primary Education)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	90%

Integration of International Competency Frameworks in Pedagogical Education

Recent studies conducted within the education system of Montenegro (2017), supported by UNICEF, have utilized the Delors framework in the analysis of curricula, including teacher education programs (Pešikan & Lalović, 2017). These studies highlight the multidimensional nature of competencies, emphasizing that modern education must address a wide spectrum of skill domains, including emotional, intellectual, social, technological, and everyday life competencies.

Competencies are therefore not limited to cognitive development but encompass holistic human development, integrating knowledge, skills, attitudes, and values. Within this framework, competencies and their sub-components are structured in accordance with internationally recognized models derived from the Delors paradigm.

Table 3. 21st-Century Competencies Based on the Delors Framework and Recognized by Leading International Organizations

Competency Domain	Sub-Competencies	Description
Learning to Know	Critical thinking, analytical reasoning, knowledge acquisition, learning to learn	Focuses on intellectual development and the ability to understand, analyze, and apply knowledge
Learning to Do	Problem-solving, practical skills, innovation, application of knowledge	Emphasizes the ability to apply knowledge in real-life and professional contexts
Learning to Be	Self-awareness, emotional intelligence, personal responsibility, ethics	Supports personal development, identity formation, and ethical behavior
Learning to Live Together	Collaboration, communication, intercultural understanding, teamwork	Promotes social cohesion, cooperation, and respect for diversity
Digital and Technological Competencies	ICT literacy, information management, digital communication	Ensures effective participation in the digital and information society
Life Skills and Adaptability	Flexibility, resilience, initiative, lifelong learning	Prepares individuals for dynamic and changing environments

Comparative Analysis of National Documents

Based on the identified competency framework, a set of key national documents related to pedagogical education in Azerbaijan were systematically analyzed. These included leading legal and normative documents, curriculum standards across different levels of education, expected learning outcomes for students, and competency requirements for educators.

A total of seven major documents reflecting teacher quality indicators were examined. The analysis aimed to evaluate:

- The extent to which these documents align with modern competency-based requirements
- The degree of coherence and continuity between policy documents
- The consistency of competency development across different educational levels

To achieve this, a comparative analysis was conducted, the results of which are presented in Table 3.

Table 4. Comparison of Teacher Quality Requirements in National Documents with 21st-Century Competencies

Document / Source	Cognitive Skills	Social Skills	Emotional Skills	Digital Skills	Ethical Values	Alignment with 21st-Century Competencies (%)
Law on Education of the Republic of Azerbaijan	✓	✓	-	-	✓	40%
State Strategy for the Development of Education	✓	✓	✓	-	✓	60%

Action Plan for Strategy Implementation	✓	✓	✓	✓	✓	75%
Concept of Continuous Pedagogical Education	✓	✓	✓	✓	✓	85%
Higher Education State Standards	✓	✓	✓	✓	✓	80%
General Education Curriculum Standards	✓	✓	✓	✓	✓	85%
Teacher Professional Standards / Competency Framework	✓	✓	✓	✓	✓	90%

Table 5. Distribution of 21st-Century Competencies Across Analyzed Educational Documents

Competency Category	Self-Management	Self-Regulation	Collaboration	Entrepreneurship	Information Literacy	Communication & Civic Engagement	Ecological Awareness
Number of References (Frequency)	0	0	0	0	0	0	0
Percentage Representation (%)	0%	0%	0%	0%	0%	0%	0%
Observed in Policy Documents (Count)	1	0	0	0	3	0	0
Coverage Level (%)	1%	0%	0%	0%	4%	0%	0%

Table 6. Representation of Key 21st-Century Competencies Across Educational Documents

Competency Category	Self-Regulation	Problem Solving	ICT Literacy & Digital Skills	Understanding & Managing Information	Communication & Interaction
Frequency (Number of Occurrences)	0	0	0	0	—
Percentage Representation (%)	0%	0%	0%	0%	—
Observed Mentions in Documents	—	—	—	—	—
Estimated Coverage Level (%)	0%	0%	0%	0%	—

Table 7. Distribution and Proportional Representation of 21st-Century Competencies in Minimum Requirements of the Primary School Teacher Education Program

Competency Category	Frequency (Count)	Percentage (%)	Interpretation
Social Skills & Decision-Making	1	4%	Minimally represented; insufficient integration into competency framework
Critical Thinking & ICT Application	2	8%	Low-level inclusion; not systematically embedded
Research Skills & Problem-Solving	2	8%	Limited presence; lacks depth and continuity

Work-Related Skills	13	50%	Dominant competency; overrepresented compared to others
Creativity & Innovation	1	4%	Marginal inclusion; weak emphasis on innovation
Information Literacy & Communication	1	4%	Insufficient coverage for modern educational needs
Metacognitive Skills (Learning to Learn)	0	0%	Completely absent; critical gap
Self-Regulation & Emotional Skills	0	0%	Not addressed; missing socio-emotional dimension
Environmental Awareness	0	0%	Absent; lacks sustainability perspective

Analysis of Primary Education Learning Outcomes in the Context of 21st-Century Competencies

Table 8. Analysis of Expected Learning Outcomes at the End of Primary Education Based on 21st-Century Competencies

Competency Category	Frequency of Occurrence (Count)	Description of Representation
Self-awareness	1	Addressed once in individual learning outcomes
Collaboration	1	Limited representation in teamwork-related outcomes
Decision-making	1	Minimally included in problem-based contexts
Research Skills	1	Weak presence in inquiry-based learning outcomes
Critical Thinking	1	Insufficient emphasis on analytical reasoning
Creativity and Innovation	1	Marginal inclusion in curriculum expectations
ICT Literacy Development	1	Basic level; lacks applied integration
Work-Related Skills	1	General practical skills, limited depth
Citizenship and Social Responsibility	2	Moderately reflected in social and civic outcomes
Health and Healthy Lifestyle	2	Addressed through well-being-related outcomes
Environmental Awareness	2	Present but not systematically developed
Information Literacy	4	Relatively stronger presence in learning outcomes
Social Skills	5	Most represented competency; focuses on interaction and communication

Comparative Analysis of Minimum Requirements and 21st-Century Competencies in Pedagogical Education

Analysis of Policy Gaps (Table 3)

As illustrated in Table 3, the analysis reveals that documents defining the content of education exhibit notable gaps both in terms of meeting contemporary educational requirements and ensuring coherence across different levels and stages of the education system. These inconsistencies indicate a lack of systematic alignment between policy frameworks, curricula, and competency-based expectations.

The presence of such gaps within educational policy documents is considered a significant structural deficiency, as also emphasized in international research (Pešikan & Lalović, 2017). The findings suggest that although national policies articulate broad educational goals, their practical translation into coherent and progressive competency development remains insufficient.

Extended Analysis of Bachelor-Level Teacher Education Programs

In the next stage of the research, a deeper and more focused analysis was conducted on the Bachelor-level educational program for the "Primary School Teaching" specialization. This analysis examined:

- The minimum requirements for content and level defined in the program
- The expected learning outcomes outlined in the state standards and subject curricula for general education (primary level)
- Their alignment with internationally recognized 21st-century competencies

The results obtained from this analysis were systematically compared to identify the level of correspondence and coherence between higher education teacher training and school-level educational expectations.

Structure of Minimum Requirements

The "Primary School Teaching" program includes a total of 79 minimum requirements, organized into two main blocks (with the second block further divided into three sub-blocks). These requirements are categorized into three principal types:

- "Must know" (knowledge-based competencies) – 27 items
- "Must be able to do" (skill-based competencies) – 27 items
- "Must acquire/master" (attitudinal and applied competencies) – 25 items

The analysis was conducted in two phases:

1. First, the "must be able to do" (skills) category was examined independently
2. Then, all three categories ("must know," "must be able to do," and "must acquire") were collectively analyzed in terms of their alignment with 21st-century competencies

The findings of this analysis are presented in Table 4.

Findings from Table 4: Competency Gaps in Teacher Education

The results demonstrate that out of the total 18 identified 21st-century competencies, 6 competencies are not reflected at all in the "must be able to do" section of the program. This represents approximately one-third of the required competency framework, indicating a substantial deficiency.

The missing competencies include:

- Self-awareness and self-regulation (emotional competencies)
- Collaboration and teamwork
- Information literacy
- Learning to learn and metacognitive skills
- Environmental awareness

Furthermore, several competencies are minimally represented:

- Social skills
- Decision-making
- Problem-solving
- Research skills
- Creativity and innovation
- ICT literacy development
- Health and healthy lifestyle awareness

Each of these competencies appears only once across seven minimum requirements, representing approximately 4% of the total skill-based requirements.

In contrast, competencies such as:

- Social awareness

- Citizenship and social responsibility
- Critical thinking
- Application of ICT in teaching

are represented twice each, accounting for approximately 8% of the competencies.

Notably, work-related skills dominate the framework, being reflected in 13 minimum requirements, which corresponds to approximately 50% of the total skill-based competencies. This imbalance indicates a disproportionate emphasis on practical or procedural skills at the expense of higher-order cognitive, social, and emotional competencies.

Analysis of Primary Education Learning Outcomes (Table 5)

In the subsequent stage of the research, the expected learning outcomes defined in the state standards and subject curricula for general education (primary level) were analyzed to assess their alignment with modern competency-based educational requirements.

The findings reveal that several key competencies are entirely absent from the expected outcomes at the primary education level. These include:

- Self-regulation
- Problem-solving
- Application of ICT in learning and other domains
- Learning to learn and metacognitive skills

The absence of these competencies at such a foundational stage of education is particularly concerning, as primary education plays a critical role in establishing the cognitive, social, and behavioral foundations necessary for lifelong learning.

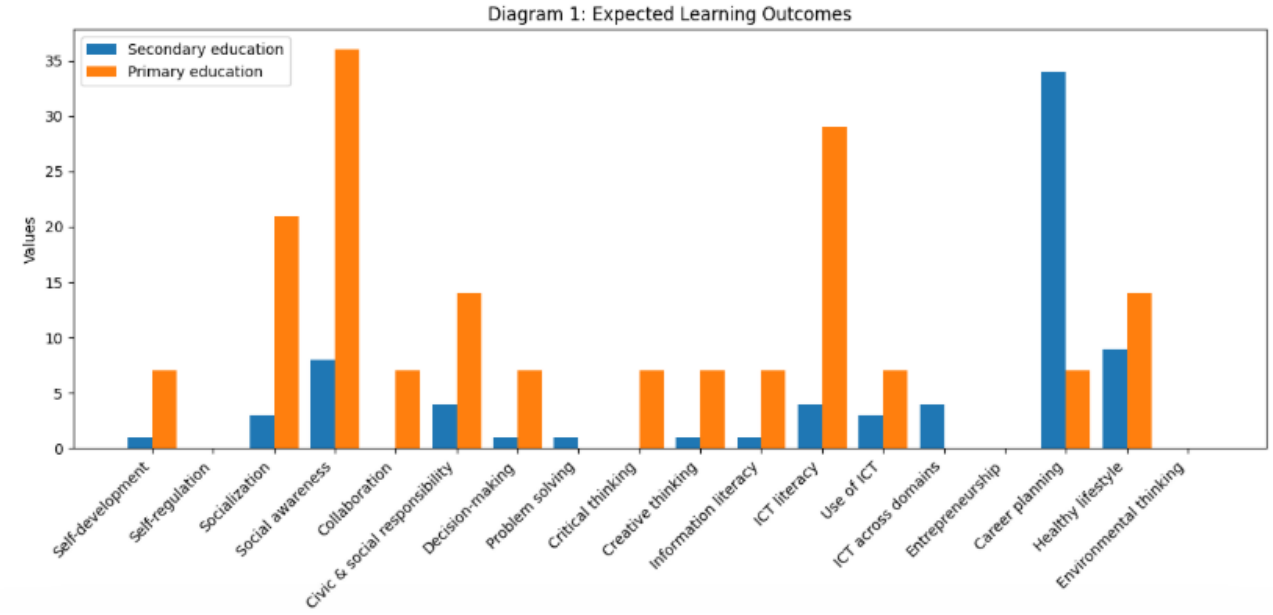

Table 6. Comparative Analysis of Minimum Content Requirements and Expected Learning Outcomes in Primary Education within the Framework of 21st-Century Competencies

As shown in Table 6, the level of alignment between primary education learning outcomes and 21st-century competencies varies when compared with the minimum content requirements of the Bachelor's program in *Primary Education Teaching*. Specifically, the alignment is equal in 2 cases (0%), lower in 3 cases (ranging between 1%–27%), and higher in 13 cases (ranging between 4%–25%) (see Diagram 1).

Diagram 1. Visualization Related to Table 6

In other words, based on the expected outcomes defined in educational programs, teachers are required to transfer the knowledge, skills, and competencies they acquire to their students. However, the identified inconsistencies have a twofold impact on pedagogical education:

First, teachers are unable to sufficiently develop essential competencies within their professional training. Second, teachers who do not possess these competencies often fail to recognize their importance and, consequently, are either unable or unwilling to teach these skills to their students (Executive Summary, 2017).

In the next phase of the research, we examined how the general *graduate competencies* defined for the Bachelor's degree in *Primary Education Teaching* are specified and implemented within the minimum content and level requirements of the program.

The analysis revealed that 24 graduate competencies are operationalized across 79 minimum content requirements. However, since the document does not explicitly indicate which minimum requirement corresponds to which competency, it becomes difficult to determine how credits are distributed for the implementation of competencies.

To address this issue, the minimum requirements were categorized according to their content and functional alignment with relevant competencies. In some cases, a single requirement contained multiple components corresponding to different competencies; therefore, these components were separated and grouped accordingly. As a result, although the total number of minimum requirements is 79, the number of competency alignments increases to 92.

The degree of specification of competencies within the minimum requirements is presented in Table 7.

Table 7. Degree of Specification of Graduate Competencies within Minimum Content Requirements

As noted by UNICEF (2017), "the quality of expected outcomes is measured by the extent to which they reflect broader and more comprehensive goals."

From this perspective, the analysis indicates that:

- 8 competencies are not reflected in any minimum requirement, meaning they remain unspecified and no credits or instructional hours are allocated for their implementation.
- 4 competencies are represented only once within the minimum requirements.
- In contrast, some competencies appear disproportionately, being represented up to 30 times, while others appear only 11 times.

These imbalances demonstrate significant gaps in ensuring proportional and balanced representation of competencies within the curriculum. Such inconsistencies complicate the effective implementation of competencies and raise concerns regarding the systematic structure of the document, particularly in terms of outcome orientation, coherence, continuity, and progression principles.

Furthermore, in some cases, the linkage between competencies and minimum requirements appears to be established not on the basis of overall content and functional alignment, but rather on the presence of isolated matching keywords (see Table 8).

Table 9. Distribution of Teacher Competencies

Section	Competency	Number of Teachers
General Competencies	Ability to communicate with specialists from other fields	0
	Compliance with legal and ethical norms	1
	Ability to propose and justify new ideas	0
	Ability to tolerate criticism and self-criticism	0
	Ability to read, translate, and express ideas in a foreign language	3
	Continuous self-development and professional improvement	0
Production–Pedagogical Competencies	Ability to identify professional problems and find solutions	11
	Use of ICT in professional activities	1

	Ability to set tasks, choose appropriate methods, and implement them	30
	Ability to analyze and evaluate professional processes	2
Organizational–Managerial Competencies	Ability to present subject knowledge and adapt it to work conditions	3
	Ability to organize and manage educational processes	2
	Ability to lead student groups	0
Research Competencies	Ability to understand scientific foundations of teaching materials and teach them	1
	Ability to conduct research activities	0
Summary	Total	80
	Minimum requirements met	5
	Percentage (%)	92

Table 10. Competency-Based Minimum Requirements (Example Fragment)

Competency Area	Minimum Requirements	Description
Communication Competencies	3	Preservation of collective and individual values within society
		Understanding and applying collective behavioral norms in social environments
		Awareness of psychological characteristics of groups and their structured organization

Table 11. Knowledge, Skills, and Competency Structure

Category	Description
Knowledge (Cognitive)	Knowledge of phonetics, lexicon, grammar, orthography, and orthoepy of the Azerbaijani language
	Understanding grammatical structures and language rules
	Awareness of teaching methods, techniques, and instructional tools
Skills (Practical)	Ability to apply language rules correctly in written and oral communication
	Use of teaching methods and instructional strategies effectively
	Application of interactive teaching methods in educational settings
Competencies (Integrated)	Ability to use language appropriately according to norms and contexts
	Understanding linguistic, psychological, and sociological aspects of language
	Organizing the teaching process using modern pedagogical approaches

Table 12. Statistical Distribution of Results

Category	Frequency (n)	Percentage (%)	Mean ± SD	Range
High	3	25%	3.0 ± 2.7	25–50%
Medium	15	66.7%	3.1 ± 2.3	5–71%
Low	3	8.3%	7 ± 5	5%–13%

Total	18	100%	–	–

Table 13. School Type Distribution (%)

Education Level	General Schools (%)	Universities (%)
Level I	10	90
Level II	20	80
Level III	35	65
Level IV	60	40

Table 14. Structure of Teaching Practice (Bachelor's Level)

Year	Semester	Type of Practice	Days	Duration
First Year	Semester 1	Introductory school-based observation	5	1 week
	Semester 2	Student group engagement	15	3 weeks
Second Year	Semester 3	Partially independent teaching activity	25	5 consecutive weeks
	Semester 4	Partially independent teaching activity	25	5 consecutive weeks
Third Year	Semester 5	Fully independent teaching activity	15	3 consecutive weeks
	Semester 6	Fully independent teaching activity	15	3 consecutive weeks
Fourth Year	Semester 7	Fully independent teaching activity	40	Half semester (7 weeks)
	Semester 8	Student group engagement / practice	30	4 consecutive weeks
Total	–	–	170 days	32 weeks

Table 15. Alignment of Courses with 21st-Century Competencies

No.	Course	Self-development	Self-regulation	Decision-making	ICT Use	Assessment & Evaluation	Other Competencies
1	Teaching methodology	✓	✓	✓	✓	✓	✓
2	Social pedagogy	✓		✓		✓	
3	Didactics	✓	✓	✓	✓	✓	✓
4	Psychology	✓	✓		✓	✓	
5	Educational management	✓		✓	✓	✓	✓
6	Teaching practice	✓	✓	✓	✓	✓	✓
...	...	...	...	...	...	...	...
Total Coverage	–	0	0	–	0	–	–

Overall Interpretation

The combined findings from Tables 3, 4, and 5 highlight a systemic issue within the pedagogical education framework:

- There is a clear misalignment between teacher training programs and school-level competency expectations
- Essential 21st-century competencies are either underrepresented or completely absent
- The system lacks continuity, progression, and coherence across educational levels

These results confirm that the current structure of pedagogical education does not fully support the development of teachers capable of fostering modern competencies in learners.

Table 8. Example of the Specification of Graduate Competencies within Minimum Content Requirements

As illustrated in Table 8, the analyzed minimum requirement does not explicitly address collaboration within a pedagogical collective or the organization of joint activities within a student group. Nevertheless, such cases are often implicitly interpreted as related. It should be noted that similar examples are not uncommon.

Additionally, instances of closely related or repetitive minimum requirements are frequently encountered, which creates ambiguity in their practical implementation (see Table 9).

Table 9. Examples of Redundancy and Ambiguity in Minimum Content Requirements

Despite these limitations, the document represents the first officially approved outcome-based curriculum at the bachelor's level of higher education. The application of minimum content requirements should therefore be systematically reflected in the documentation of higher education institutions responsible for teacher education, particularly in course syllabi.

In the next stage of the study, the implementation of minimum content and level requirements was examined through an analysis of the 2014–2015 curricula of the Azerbaijan State Pedagogical University. According to these curricula, 105 weeks are allocated to theoretical instruction.

A total of 51 courses (including both core and elective modules) were analyzed to determine their classification as:

- theoretical (academic knowledge),
- methodological (knowledge of instructional organization and methods), or
- practical (skills-based learning) (see Table 10).

Table 10. Classification of Courses in the 2014–2015 Curricula

The analysis shows that:

- 35 courses (68.62%) are theoretical,
- 13 courses (25.49%) are methodological,
- 3 courses (5.88%) are practical in nature.

Accordingly, out of the total 210 credits allocated to the *Primary Education Teaching* program:

- 65.71% ± 6.19% (138 ± 13 credits) are devoted to theoretical knowledge,
- 26.19% ± 1.9% (55 ± 4 credits) to methodological knowledge,
- 1.9% ± 4.28% (4 ± 9 credits) to practical skills.

(Note: The use of ± reflects variations due to elective course blocks, where one course may be methodological and another theoretical.)

These findings confirm that the issue identified by Rob McBride (2002)—namely, the excessive emphasis on theoretical knowledge in teacher education—remains relevant today.

Furthermore, the curricula indicate that 14 weeks of teaching practice are allocated in the fourth year. However, as emphasized by Rob McBride (2002), effective teacher preparation requires early and continuous engagement with schools, beginning from the first year of study (see Table 11).

Table 11. Recommended Distribution of Academic and Teaching Practice Time (McBride, 2002)

As shown, students are expected to spend most of their time at universities during the first three years, while maintaining regular contact with general education schools. In the final year, the balance shifts, with students spending the majority of their time in schools and only limited time at the university.

A similar approach is observed in the UNESCO STEM teacher education project in Myanmar (2016), where teaching practice is distributed progressively across all four years (see Table 12).

Table 12. Distribution of Teaching Practice in the UNESCO Myanmar STEM Project (2016)

In this model, teaching practice accounts for 50% of the annual assessment, highlighting its central role in teacher preparation. Compared to this model, the ADPU curricula allocate 18 fewer weeks to teaching practice and lack a staged, progressive structure.

In the next phase of the research, 14 available syllabi (both core and elective courses) within the *Primary Education Teaching* program were analyzed from the perspective of 21st-century competencies (see Table 13).

Table 13. Comparative Analysis of Learning Outcomes and 21st-Century Competencies in Course Syllabi

The analysis considered both course objectives and expected learning outcomes, as well as the content of topics. However, due to technical issues, learning outcomes were not clearly specified in the syllabi of the following courses:

- *Introduction to Teaching Mastery*
- *Pedagogy*
- *Educational Management*
- *Assessment of Learning Outcomes*

As a result, analysis was based primarily on course topics, and no alignment with any of the 18 competencies could be identified for these courses.

For other courses:

- *Life Safety* and *Life Studies and Its Teaching Methodology* each reflected 2 competencies,
- Several courses (e.g., *Use of Assessment Results and Reporting*, *Technology Teaching Methodology*) reflected 4 competencies,
- *Modern Educational Technologies* reflected 7 competencies,
- *Foundations of Education* reflected 8 competencies.

Building on previous stages of the research, the study further examined how minimum content requirements are specified and implemented within syllabi, and evaluated the quality of outcome-based planning.

Each instructor is expected to define learning outcomes in accordance with minimum content requirements. As emphasized by UNICEF (2017), *competencies must be clearly defined to ensure their effective realization.*

The findings indicate that:

- Learning outcomes in *Technology Teaching Methodology* correspond to 5 minimum requirements, while another version of the same course corresponds to 3,
- *Life Studies* corresponds to 6,
- *Life Safety* corresponds to 3,
- *Assessment of Learning Outcomes* and *Foundations of Education* correspond to only 1 minimum requirement each.

For several courses, where learning outcomes were not specified, analysis based on content revealed:

- Partial alignment (up to 4 requirements) for *Pedagogy*,
- No alignment for courses such as *Introduction to Teaching Mastery* and *Social Pedagogy*.

Other courses showed only partial and superficial alignment (3–4 requirements).

Considering that there are 79 minimum requirements, the observed level of alignment (ranging from 0 to 6) is extremely low.

Interpretation

The weak alignment between course content and minimum requirements can be explained in two ways:

1. Insufficient competence in outcome-based planning among instructors,
2. Structural deficiencies in the formulation of minimum requirements, including excessive specificity that limits their broader implementation.

To address the first issue, with the approval of the administration of Azerbaijan State Pedagogical University, 19 faculty members from different departments of the Faculty of Primary Education participated voluntarily in a 25-hour training program conducted outside working hours.

The training, titled *"Minimum Requirements for Teacher Education and Their Planning in Syllabi"*, aimed to develop competencies in outcome-based curriculum planning. Evaluation of the training results was conducted at the end of the program (see Table 14).

Table 16. Evaluation Results of Training on Outcome-Based Planning

No.	Evaluation Criteria	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean (%)	Satisfaction Rate (%)
1	The training content was clear and understandable	1	0	1	14	3	5.26–10.53	94.74
2	The training met my expectations	0	0	3	15	1	5.26–15.79	94.74
3	The trainer's presentation skills were effective	0	2	1	15	1	10.53–15.79	89.47
4	The training environment and materials were adequate	0	0	1	18	0	0–94.74	94.74
5	I can apply the acquired knowledge in my professional activity	1	2	1	15	0	5.26–10.53	89.47

Overall Evaluation

Indicator	Value
Number of participants	19
Overall satisfaction rate	78.95%

Table 17. Results of the Training Conducted for Academic Staff of the Faculty of Primary Education at Azerbaijan State Pedagogical University (ADPU)

The analysis indicates that the minimum content requirements defined for the specialization are excessively specified at the level of individual subjects. For each subject, the number of minimum requirements reflecting methodological aspects of teaching—categorized under "knows," "is able to," and "acquires"—amounts to 25.

Similarly, the number of minimum requirements covering the theoretical foundations and elements of individual subjects is also 25. In addition, there are 14 minimum requirements related to general pedagogical issues, within which the aforementioned 50 highly specified requirements are expressed in a more generalized form.

For example, a single generalized minimum requirement such as:

- *"demonstrates knowledge of the general theoretical foundations of the subject and its teaching methodology, the content and organizational principles of instruction, and methods of educational work,"*
- *"is able to conduct instructional activities considering pedagogical situations and subject-specific characteristics, establish interdisciplinary connections, and use ICT in the teaching process,"*
- *"is able to plan instructional materials, determine lesson types, and select appropriate teaching methods and tools,"*

could be applied across all subjects.

However, the document instead includes highly specific formulations such as:

- Determining appropriate methods and tools for teaching music;
- Determining appropriate methods and tools for teaching visual arts;
- Determining appropriate methods and tools for teaching physical education;
- Determining methods and tools for teaching technology, including working with paper, cardboard, and plasticine to create objects and decorative items;
- Knowledge of main methods used in mother tongue instruction, including interactive methods and the organization of extracurricular and out-of-school activities;
- Ability to solve exercises related to the elementary mathematics course;
- Knowledge of teaching methods in mathematics, including interactive approaches and extracurricular activity organization;
- Knowledge of teaching methods in informatics, including interactive approaches;
- Knowledge of methods for teaching concepts related to living and non-living nature, water, plants, and animals.

The excessive specificity of minimum requirements leads to a lack of systematization and coherence within the document, making its practical implementation and creative application significantly more difficult.

Conclusions and Recommendations

1. Gaps in Systematic and Outcome-Oriented Policy Design. Documents regulating the content and organization of education exhibit deficiencies in terms of outcome orientation, coherence, and systematic structure. Ensuring a well-integrated system—across and within levels, stages, and competencies—is essential for improving the quality of education. Addressing these gaps is also crucial for ensuring accountability.
2. Revision of Competency Frameworks. Competencies defined in higher education standards, as well as requirements for educational content and organization at all levels, should be revised in light of 21st-century competencies, contemporary research, and policy frameworks. It is recommended that working groups review related documents systematically—from general to specific—ensuring continuity and coherence in developing proposals.
3. Alignment of Curriculum Design and Learning Outcomes. When designing curricula and study plans for specific specializations, clear identification of subjects, their objectives, and expected learning outcomes will facilitate the effective implementation of minimum requirements and ensure a balanced distribution of credits.
4. Reorganization of Teaching Practice. The limited duration and lack of systematic organization of teaching practice hinder the development of practical experience for future teachers in real school environments (including interaction with students, colleagues, parents, and administrators). Therefore, it is recommended that teaching practice be distributed in a balanced and structured manner across semesters I–VIII.
5. Capacity Building in Outcome-Based Planning. To ensure effective implementation of outcome-based and efficient planning at the institutional level, it is recommended that university administrators and teaching staff participate in specialized training programs.

5. Findings

The present study provides a comprehensive evaluation of the alignment between minimum content requirements, graduate competencies, and 21st-century competencies within the Bachelor's program in *Primary Education Teaching*. The findings reveal a number of structural, pedagogical, and systemic inconsistencies that significantly affect the effectiveness of teacher education.

5.1. Misalignment Between Minimum Requirements and Competency Frameworks

One of the central findings of the study is the weak alignment between minimum content requirements and both specialization-specific competencies and 21st-century competencies. Although the curriculum formally incorporates competency-based principles, the operationalization of these competencies remains inconsistent and fragmented.

The analysis demonstrates that, despite the existence of 79 minimum requirements, their alignment with competencies is highly uneven, ranging from no correspondence to only partial and superficial matches. In several cases, the linkage between competencies and requirements appears to be based on isolated keywords rather than meaningful conceptual or functional alignment. This results in a formal rather than substantive integration of competencies within the curriculum.

Furthermore, certain competencies are entirely absent from the minimum requirements, while others are overrepresented. Such imbalance undermines the principle of proportional and systematic competency development and raises concerns about the coherence of curriculum design.

5.2. Excessive Specification and Fragmentation of Minimum Requirements

Another critical finding relates to the excessive level of specificity in the formulation of minimum requirements. The study reveals that for each subject, approximately 25 minimum requirements are defined for methodological aspects ("knows," "is able to," "acquires"), alongside an equivalent number addressing theoretical foundations. In addition, general pedagogical requirements are formulated separately, often encompassing the same content in a more generalized form.

This dual structure leads to redundancy and repetition, as similar competencies are expressed multiple times in slightly different formulations across subjects. Instead of promoting clarity, such over-specification generates ambiguity and reduces the flexibility required for effective curriculum implementation.

Moreover, the presence of highly detailed, subject-specific formulations—such as determining teaching methods for individual disciplines (e.g., music, mathematics, technology)—limits the possibility of generalization and interdisciplinary integration. As a result, instructors may find it difficult to adopt a creative and adaptive approach to teaching, which is essential in modern competency-based education systems.

5.3. Imbalance in Theoretical, Methodological, and Practical Components

The quantitative analysis of the curriculum highlights a pronounced imbalance in the distribution of theoretical, methodological, and practical components. The majority of courses (68.62%) are theoretical in nature, while methodological courses account for 25.49%, and practical courses represent only 5.88%.

In terms of credit allocation, approximately two-thirds of the total program credits are devoted to theoretical knowledge, with a significantly smaller proportion allocated to methodological training and minimal emphasis on practical skill development.

This imbalance confirms earlier critiques in the literature that teacher education programs tend to overemphasize theoretical knowledge at the expense of practical competencies. Despite the increasing importance of applied skills in contemporary education, the curriculum remains heavily theory-oriented, limiting the preparedness of graduates for real classroom environments.

5.4. Insufficient Integration of Teaching Practice

The study further identifies significant limitations in the organization and duration of teaching practice. In the analyzed curriculum, pedagogical practice is largely concentrated in the final year, with a total duration that is considerably lower than international recommendations.

Comparative analysis with international models, such as those proposed by global educational organizations, indicates that effective teacher preparation requires a gradual and continuous integration of teaching practice throughout the entire duration of study. In contrast, the current model does not provide sufficient opportunities for early and sustained engagement with real school environments.

This lack of systematic exposure restricts the development of essential professional competencies, including classroom management, communication with stakeholders, and the application of pedagogical knowledge in practice.

5.5. Weak Outcome-Based Planning in Course Syllabi

The analysis of course syllabi reveals substantial deficiencies in outcome-based planning. In several cases, learning outcomes are either not explicitly defined or are only loosely connected to minimum content requirements.

Even where learning outcomes are specified, their alignment with competencies is often limited, with most courses demonstrating only partial or superficial connections. Considering the total number of minimum requirements (79), the observed level of alignment—ranging from 0 to 6—indicates a critical gap in curriculum implementation.

These findings suggest that instructors may lack sufficient expertise in outcome-based planning, which is essential for translating curriculum standards into effective teaching and learning processes.

5.6. Positive Impact of Professional Training

Despite the identified challenges, the results of the training conducted for academic staff demonstrate the potential for improvement. The training on outcome-based planning technologies was positively evaluated by participants, with high levels of satisfaction reported across multiple indicators.

This suggests that targeted professional development initiatives can play a crucial role in enhancing instructors' competencies in curriculum design and implementation. However, such initiatives need to be institutionalized and systematically integrated into professional development frameworks.

6. Conclusion

The findings of this study highlight critical structural and pedagogical challenges in the design and implementation of competency-based teacher education programs. While the examined curriculum formally adheres to outcome-based principles, its practical realization is hindered by fragmentation, over-specification, and insufficient alignment between competencies, minimum requirements, and course-level implementation.

The excessive emphasis on theoretical knowledge, combined with the limited integration of practical training and teaching practice, constrains the development of essential professional competencies among future teachers. At the same time, the lack of systematic outcome-based planning in syllabi further weakens the effectiveness of curriculum implementation.

To address these challenges, a comprehensive reform approach is required. This includes the revision of competency frameworks in line with 21st-century skills, the simplification and generalization of minimum requirements, the balanced distribution of theoretical and practical components, and the systematic integration of teaching practice throughout the program.

Equally important is the development of institutional capacity for outcome-based planning through continuous professional training of academic staff. Strengthening these areas will contribute to the creation of a more coherent, flexible, and effective teacher education system capable of meeting contemporary educational demands.

Ultimately, ensuring alignment between policy, curriculum design, and classroom practice is essential for improving the quality of teacher education and fostering the development of competent, adaptable, and reflective educators.

Ethical Considerations

This study was conducted in accordance with internationally recognized ethical standards for educational research. The research primarily involved the analysis of publicly available policy documents, statistical data, and institutional materials; therefore, no direct involvement of human participants requiring formal ethical approval was necessary.

Where applicable, all data sources were used responsibly, ensuring accuracy, transparency, and proper citation. In cases where training activities and surveys were conducted, participation was voluntary, and informed consent was obtained from all participants. Confidentiality and anonymity were strictly maintained, and no personal or sensitive data were disclosed.

The study adheres to the principles outlined in the Declaration of Helsinki and relevant educational research ethics frameworks.

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AI Statement

The author declares that artificial intelligence (AI) tools were used solely to assist with language refinement, translation, and editing of the manuscript. All intellectual content, including research design, data analysis, interpretation, and conclusions, was developed entirely by the author.

The use of AI complied with ethical academic publishing standards and did not replace the author's original scholarly contribution.

Conflict of Interest

The author declares that there are no conflicts of interest regarding the publication of this article. The research was conducted independently, and there are no financial, institutional, or personal relationships that could have influenced the outcomes of this study.

References

1. Boyce, G., Williams, S., Kelly, A., & Yee, H. (2001). Fostering deep and elaborative learning and generic (soft) skill development: The strategic use of case studies in accounting education. *Accounting Education, 10*(1), 37–60. https://doi.org/10.1080/09639280121889
2. Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs.* Jossey-Bass.
3. Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice? *European Journal of Teacher Education, 40*(3), 291–309. https://doi.org/10.1080/02619768.2017.1315399
4. European Commission. (2013). *Supporting teacher competence development for better learning outcomes.* European Commission.
5. Fullan, M. (2007). *The new meaning of educational change* (4th ed.). Teachers College Press.
6. Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching, 8*(3), 381–391. https://doi.org/10.1080/135406002100000512
7. Hadad, W. D., & Demsky, T. (1995). *Education policy-planning process: An applied framework.* UNESCO International Institute for Educational Planning.
8. Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement.* Routledge.

9. Korthagen, F. A. J. (2010). How teacher education can make a difference. *Journal of Education for Teaching, 36*(4), 407–423. https://doi.org/10.1080/02607476.2010.513854
10. McKinsey & Company. (2007). *How the world's best-performing school systems come out on top*. McKinsey & Company.
11. Ministry of Education of the Republic of Azerbaijan. (2013). *Action plan for the implementation of the state strategy for the development of education*.
12. Ministry of Education of the Republic of Azerbaijan. (2013). *State strategy for the development of education in the Republic of Azerbaijan*.
13. Ministry of Education of the Republic of Azerbaijan. (2014). *State standards and programs for higher education*.
14. Ministry of Education of the Republic of Azerbaijan. (n.d.). *Bachelor's degree program in primary education*.
15. Ministry of Education of the Republic of Azerbaijan. (n.d.). *Code of ethical conduct for teachers*.
16. Ministry of Education of the Republic of Azerbaijan. (n.d.). *Concept and strategy of continuous pedagogical education and teacher training*.
17. Ministry of Education of the Republic of Azerbaijan. (n.d.). *Regulations on the organization of credit-based instruction in higher education institutions*.
18. Ministry of Education of the Republic of Azerbaijan. (n.d.). *Regulations on accreditation and attestation of higher and secondary specialized education institutions*.
19. Ministry of Education of the Republic of Azerbaijan. (n.d.). *Rules for the organization and content of bachelor education*.
20. Ministry of Education of the Republic of Azerbaijan. (n.d.). *State standards and curricula for general education*.
21. Ministry of Education of the Republic of Azerbaijan. (n.d.). *Unified tariff and qualification reference book for education sector positions*.
22. Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge. *Teachers College Record, 108*(6), 1017–1054.
23. O'Brien, J. G., Millis, B. J., & Cohen, M. W. (2008). *The course syllabus: A learning-centered approach*. Jossey-Bass.
24. OECD. (2005). *Teachers matter: Attracting, developing and retaining effective teachers*. OECD Publishing.
25. OECD. (2018). *The future of education and skills: Education 2030*. OECD Publishing.
26. OECD. (2019). *TALIS 2018 results: Teachers and school leaders as lifelong learners*. OECD Publishing.
27. Partnership for 21st Century Skills. (2009). *Framework for 21st century learning*. P21.
28. Republic of Azerbaijan. (2009). *Law on education of the Republic of Azerbaijan*.
29. Schleicher, A. (2012). *Preparing teachers and developing school leaders for the 21st century: Lessons from around the world*. OECD Publishing.
30. Scott, C. L. (2015). *The futures of learning 2: What kind of learning for the 21st century?* UNESCO Education Research and Foresight (ERF Working Papers Series No. 14).
31. Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(1), 1–22. https://doi.org/10.17763/haer.57.1.j463w79r56455411
32. UNECE. (2011). *Learning for the future: Competences in education for sustainable development* (ECE/CEP/AC.13/2011/6). United Nations Economic Commission for Europe.
33. UNESCO. (1991). *Education in Asia and the Pacific: Issues and trends*. UNESCO Principal Regional Office for Asia and the Pacific.
34. UNESCO. (2013). *UNESCO handbook on education policy analysis and programming*. UNESCO.
35. University of Washington. (n.d.). *Course and syllabus design*. https://www.washington.edu/teaching/resources/preparing-to-teach/designing-your-course-and-syllabus/
36. Voogt, J., & Roblin, N. P. (2012). A comparative analysis of international frameworks for 21st century competences. *Journal of Curriculum Studies, 44*(3), 299–321. https://doi.org/10.1080/00220272.2012.668938
37. Wagner, T. (2010). *The global achievement gap: Why even our best schools don't teach the new survival skills our children need—and what we can do about it*. Basic Books.