BG Pulse Journal USA
ISSN:1947-2536 http://www.bgpulseusa.com/index.php/bg
BG PULSE JOURNAL

# A DUAL EDUCATION FRAMEWORK FOR INTEGRATING UNIVERSITY COURSEWORK AND PRESCHOOL PRACTICE IN UZBEKISTAN

**Samiyeva Zulayho Uktamovna**

Independent Researcher at the Institute for Retraining and Advanced Training of Directors and Specialists of Preschool Education Organizations

Doi: https://doi.org/10.5281/zenodo.23065913

**Abstract:** The persistent separation between university coursework and field practice limits the development of context-responsive professional competence among pre-service preschool teachers. This conceptual study proposes a dual education framework that connects higher education institutions and preschool education organizations through shared curriculum design, workplace mentoring, joint assessment, and evidence-based feedback. The study uses qualitative document analysis and conceptual synthesis. Its documentary corpus comprises Uzbekistan's Law on Education, Presidential Decree No. PF-73 of 28 April 2025, Ministerial Order No. 301 of 20 August 2025, and curriculum documents for the bachelor's program in Preschool Education, supplemented by international and post-Soviet scholarship on dual vocational education, professional-pedagogical preparation, and workplace learning. The analysis identifies six interdependent components: regulatory and institutional alignment, integrated curriculum design, a weekly 4+2 learning cycle, one-to-one mentoring, joint competence assessment, and a recursive monitoring and improvement loop. The resulting framework interprets the 4+2 arrangement not as a timetable solution but as a pedagogical microcycle in which theory generates workplace inquiry, practice produces evidence, mentoring supports guided participation, and reflection informs subsequent coursework. The framework contributes a preschool-specific adaptation of dual education that prioritizes child safeguarding, ethical practice, developmental observation, and gradual transfer of professional responsibility. It offers a testable basis for institutional implementation and subsequent empirical validation in teacher education settings.

**Keywords:** dual education; preschool teacher education; university-preschool partnership; workplace learning; mentoring; 4+2 model; professional competence; Uzbekistan

## 1 Introduction

The quality of preschool education depends substantially on the professional judgement of teachers who work in complex, relational, and ethically sensitive environments. Pre-service teachers must learn to interpret children's needs, organize developmentally appropriate activities, create safe and inclusive learning environments, communicate with families, collaborate with colleagues, and evaluate their own pedagogical decisions. These capacities cannot be developed through lecture-based instruction alone. They require sustained participation in authentic practice, structured guidance from experienced practitioners, and systematic opportunities to connect field experience with academic knowledge.

The theory-practice divide remains a recurring problem in teacher education. University courses often present educational concepts in disciplinary segments, while practice placements expose students to multidimensional situations that do not follow disciplinary boundaries. When practice is scheduled as a short, isolated block, students may reproduce visible routines without

understanding the pedagogical reasoning behind them. Conversely, when coursework is weakly connected to workplace problems, theoretical knowledge may remain inert and difficult to transfer. Dual education addresses this problem by distributing responsibility for learning across an educational institution and a professional workplace and by requiring both settings to contribute to a common competence profile.

In Uzbekistan, recent reforms have created a policy opportunity to redesign pedagogical practice. Presidential Decree No. PF-73 calls for a unified approach to teacher preparation, international transformation of higher education programs, continuity across educational stages, and a stronger relationship between science and practice (President of the Republic of Uzbekistan, 2025). Ministerial Order No. 301 subsequently introduced a 4+2 arrangement for third- and fourth-year students in pedagogical higher education, the principle of one mentor for one student, the attachment of educational institutions as practice and methodological bases, and digital monitoring of pedagogical practice (Ministry of Preschool and School Education, 2025). For preschool teacher education, these provisions create both an opportunity and a design challenge: regular field presence alone will not produce meaningful integration unless curriculum, mentoring, assessment, and institutional responsibilities are aligned.

This article therefore asks the following question: How can the 4+2 arrangement be transformed into a coherent dual education framework for pre-service preschool teachers? The purpose is to develop a theoretically grounded and operationally explicit framework for university-preschool collaboration. The article makes three contributions. First, it reframes dual education in preschool teacher preparation as a partnership architecture rather than a schedule. Second, it defines a weekly pedagogical microcycle linking coursework, workplace inquiry, guided practice, reflection, and curriculum adjustment. Third, it specifies preschool-sensitive conditions for mentoring and assessment, including child safeguarding, confidentiality, relational competence, and the gradual transfer of responsibility.

## 2 Theoretical Background

### 2.1 Dual education as institutional co-production

Dual education is commonly associated with the coordinated provision of learning by an educational institution and a workplace. Its defining feature is not the physical alternation between two locations but the co-production of professional competence through shared goals, complementary responsibilities, and agreed quality standards. Euler (2013) argues that the transferability of dual systems depends on institutional coordination, employer participation, curricular coherence, and quality assurance rather than on the imitation of a single national model. Deissinger (2015) similarly cautions that the German dual system functions within a particular institutional environment; therefore, adaptation requires attention to governance, occupational standards, and the capacity of participating organizations.

This institutional perspective is relevant to teacher education because preschools are not merely venues where university-designed tasks are completed. They possess situated knowledge about children, families, organizational routines, local needs, and professional expectations. A robust dual model must therefore recognize preschool education organizations as co-educators that help define practice tasks, provide mentoring, contribute evidence to assessment, and communicate

emerging workforce needs. At the same time, universities retain responsibility for conceptual depth, research-informed pedagogy, ethical standards, and the systematic progression of learning.

### 2.2 Integration of knowledge and professional activity

The integration literature provides a second conceptual foundation. Berulava (1998) treats the integration of general and vocational content as a purposeful reconstruction of educational content around common goals and professional problems, rather than as the mechanical addition of separate subjects. In professional-pedagogical education, Fedorov (2001) emphasizes the unity of pedagogical and occupational preparation. Fedorov and Komleva (2017) further conceptualize educational-professional interaction as subject-to-subject cooperation in which a learner participates in real work with a more experienced professional and gradually develops independent performance. These perspectives suggest that practice tasks should be derived from both academic learning outcomes and authentic workplace functions.

For preschool education, integration must include knowledge of child development, curriculum and pedagogy, observation and assessment, communication, inclusion, health and safety, and family engagement. A field task becomes educationally valuable when it requires the student to mobilize several knowledge domains, make a pedagogical decision, document evidence, and explain the reasoning behind the decision. Integration is therefore achieved through the design of problems and activities that cross course boundaries and generate material for reflection in subsequent university sessions.

### 2.3 Mentoring and reflective workplace learning

Workplace participation does not automatically become learning. Students need access to professional reasoning that is often invisible in routine performance. Mentors make this reasoning explicit by modelling practice, explaining decisions, providing graduated support, observing student performance, and offering timely feedback. The one-mentor-one-student principle established in the Uzbek reform can support continuity and trust, provided that mentors are selected for both professional expertise and pedagogical capacity. Mentoring must move beyond attendance control and include diagnosis, modelling, guided participation, formative feedback, and joint reflection.

Reflection connects experience to conceptual development. Students should be able to describe what occurred, identify the pedagogical problem, interpret evidence using theory, evaluate alternative actions, and formulate a next step. Without this sequence, reflective diaries may become descriptive reports with little analytical value. Within a dual model, reflection also serves an institutional function: recurring difficulties identified in practice should inform changes to coursework, tasks, mentor preparation, and assessment criteria.

## 3 Materials and Methods

The study employed a qualitative conceptual design combining document analysis, comparative interpretation, and pedagogical modelling. The primary policy and curriculum corpus consisted of four sources: the Law of the Republic of Uzbekistan on Education; Presidential Decree No. PF-73 on improving teacher preparation; Ministerial Order No. 301 on dual education and student assessment in pedagogical higher education; and the curriculum documents for bachelor's

program 60110200 in Preschool Education. The scholarly corpus included publications on dual vocational education, the development of professional-pedagogical education, integration of academic and occupational content, workplace interaction, and comparative studies of the German vocational education system.

The documents were read through five analytic categories: (a) purposes and intended learning outcomes; (b) institutional roles and accountability; (c) curriculum and time organization; (d) mentoring and student support; and (e) assessment, monitoring, and feedback. Provisions and theoretical claims were compared across these categories. The framework was then constructed through functional modelling: each component was linked to a specific problem, a set of institutional actions, an observable process, and an expected developmental outcome. Internal coherence was checked by tracing whether inputs, activities, evidence, and outcomes formed a complete feedback cycle.

This is a conceptual and policy-oriented study. It does not report experimental effects or student outcome data. The proposed framework should therefore be understood as a theoretically justified and operationally specified model that requires empirical testing. No human participants or personal data were involved in the present analysis.

## 4 The Uzbek 4+2 Policy Context

The 4+2 model organizes the learning week around four days of university-based theoretical and methodological preparation and two days of pedagogical practice in a preschool or school setting. Ministerial Order No. 301 applies the arrangement to third- and fourth-year full-time students and requires systematic implementation of pedagogical practice. It also establishes one-to-one mentor assignment, encourages the inclusion of innovative technologies that support independent learning, permits an individual dual format with a workload of up to 0.5 of a staff position where a vacancy exists, and calls for digital management and monitoring of practice (Ministry of Preschool and School Education, 2025). These provisions are significant because they regularize workplace participation and recognize mentoring and monitoring as structural elements.

However, the educational value of the 4+2 model depends on how the two parts of the week are connected. If university courses and preschool tasks are planned independently, the arrangement may increase time in practice without improving the transfer of knowledge. If mentors receive no shared criteria, feedback may focus on compliance or personal impressions. If digital monitoring is reduced to attendance and uploaded files, documentation may become an administrative burden rather than evidence of learning. The 4+2 policy therefore needs a pedagogical operating model that connects the institutional level with weekly learning activity.

## 5 Proposed Dual Education Framework

The proposed framework consists of six mutually dependent components: regulatory and institutional alignment; a jointly defined competence profile; integrated curriculum and workplace tasks; a 4+2 weekly learning microcycle; one-to-one mentoring; and joint assessment with recursive monitoring. The framework begins with policy and organizational inputs, moves through coordinated learning processes, produces evidence of competence development, and returns monitoring information to curriculum and partnership decisions.

**Table 1 Functional responsibilities within the university preschool partnership**

| Area | University responsibility | Preschool responsibility | Joint product |
|---|---|---|---|
| **Competence profile** | Defines program outcomes and links them to research-informed pedagogical knowledge. | Identifies authentic functions, recurring situations, and context-specific professional expectations. | Shared graduate competence profile |
| **Curriculum** | Maps course topics to progressive practice tasks and reflection prompts. | Provides appropriate settings, cases, routines, and supervised responsibilities. | Integrated practice syllabus |
| **Mentoring** | Prepares mentors and provides methodological supervision through a university tutor. | Assigns a qualified practitioner who models, observes, and coaches practice. | Three-way support plan |
| **Assessment** | Assesses conceptual reasoning, planning, methodological accuracy, and reflection. | Assesses situated performance, interaction, reliability, and professional adaptation. | Joint competence judgement |
| **Monitoring** | Maintains the portfolio system and analyses longitudinal evidence. | Verifies participation and workplace evidence while reporting implementation barriers. | Evidence-based improvement actions |

### 5.1 Regulatory and institutional alignment

The partnership must be formalized through an agreement that specifies learning outcomes, schedules, role boundaries, mentor selection, supervision, assessment procedures, child safeguarding, confidentiality, workload, and mechanisms for resolving problems. Institutional parity is important: the university and preschool perform different functions but share responsibility for the quality of preparation. A named practice coordinator should manage placements, communication, documentation, and rapid response to implementation problems. Partnership review should occur at least once per semester and include evidence from students, mentors, university tutors, and preschool leaders.

### 5.2 Integrated curriculum and progressive practice

Course content and field tasks should be planned in a single curriculum map. Each major topic should generate a workplace inquiry or performance task, a form of evidence, and a reflection

question. For example, a university module on language development may lead students to analyse the preschool language environment, design a developmentally appropriate play-based activity, implement it with mentor support, document children's responses without exposing personal data, and evaluate the activity using relevant theory. A module on inclusive pedagogy may require environmental observation, identification of participation barriers, adaptation of materials, and discussion with a multidisciplinary team.

Responsibility should be transferred gradually. A five-stage progression is recommended: focused observation; assisted participation; co-planning and co-teaching; supervised independent practice; and integrated professional performance. Progression should depend on demonstrated readiness rather than on time alone. Tasks must remain appropriate to the student's competence and should never compromise children's safety or rights.

### 5.3 The 4+2 weekly learning microcycle

The central design feature is a weekly microcycle that makes theory and practice mutually productive. The four university days should prepare a focused conceptual lens and practice question. During the two preschool days, the student observes or performs a related activity, collects ethically appropriate evidence, and receives mentor feedback. The student then produces a brief analytical reflection. In the following university session, field evidence is discussed, misconceptions are addressed, and a revised task is developed. This cycle can be expressed as coursework input, workplace inquiry, guided performance, evidence and feedback, reflection, and instructional adjustment.

### 5.4 One-to-one mentoring

The one-mentor-one-student principle creates the possibility of continuity, personalized support, and a gradual increase in responsibility. Its success depends on the quality of mentor preparation. Mentors should understand program outcomes, task progression, feedback methods, assessment rubrics, and ethical expectations. Short mentor development modules can focus on making professional reasoning visible, using questioning rather than directive correction, distinguishing formative and summative assessment, documenting evidence, and responding to student difficulty.

A three-way mentoring structure is recommended. The preschool mentor supports daily performance and professional socialization. The university tutor connects experience with theory and safeguards academic standards. The student maintains an individual learning plan and evidence portfolio. Brief but regular three-way conferences reduce conflicting expectations and allow support to be adjusted before problems become entrenched.

### 5.5 Joint competence assessment

Assessment should combine diagnostic, formative, and summative functions. Initial diagnosis identifies the student's knowledge, communication readiness, and capacity for independent work. Weekly formative assessment uses observation notes, task products, mentor feedback, and reflective entries. Summative assessment requires the student to plan, conduct, and analyse an integrated pedagogical activity and to justify decisions with evidence and theory.

Five assessment domains are proposed: theoretical and methodological reasoning; planning and organization of pedagogical activity; child-centred interaction and safeguarding; collaboration with colleagues and families; and reflection and professional self-development. The mentor and university tutor should use a common analytic rubric while contributing different forms of evidence. The final judgement should include both a performance level and a narrative profile describing strengths, priority development needs, and the next professional challenge.

### 5.6 Digital monitoring and improvement

A digital system can support scheduling, portfolios, mentor comments, university supervision, and longitudinal review. Its design should prioritize learning evidence rather than document volume. Suitable evidence may include anonymized plans, observation protocols, reflective commentaries, mentor-verified performance records, and revised materials. Images or recordings involving children require lawful authorization, strict access controls, and clear retention rules. Digital monitoring should serve three levels: immediate student support, semester-level partnership review, and program-level curriculum improvement.

## 6 Conditions for Implementation

The framework requires more than regulatory authorization. Its implementation depends on the following pedagogical and organizational conditions:

- a shared competence profile that is understood by university faculty, preschool leaders, mentors, and students;
- a curriculum map linking each field task to course outcomes, expected evidence, and a reflection prompt;
- careful selection and preparation of mentors, together with recognition of their additional responsibility;
- gradual transfer of responsibility based on demonstrated readiness and child safeguarding requirements;
- common assessment rubrics and moderation procedures to reduce subjectivity;
- a manageable digital portfolio that captures development rather than administrative compliance;
- scheduled three-way communication among the student, mentor, and university tutor;
- periodic review of implementation evidence followed by documented corrective action.

These conditions reflect five design principles: institutional parity, coordinated autonomy, methodological coherence, contextual flexibility, and learner agency. Institutional parity means that the two organizations are equal contributors to a shared outcome, although their responsibilities differ. Coordinated autonomy allows each organization to preserve its professional role while acting within a common framework. Methodological coherence aligns goals, tasks, mentoring, and assessment. Contextual flexibility permits tasks to be adapted to preschool type, age group, local needs, and student readiness. Learner agency positions the student as an increasingly responsible participant who plans, acts, evaluates evidence, and makes justified improvements.

## 7 Discussion

The proposed framework extends dual education beyond its conventional association with industrial and technical occupations. In preschool teacher education, the workplace is a pedagogical and relational environment in which performance cannot be reduced to standardized production tasks. Competence includes ethical sensitivity, interactional judgement, responsiveness to children, collaboration, and reflection. This requires a dual model that combines the structural strengths of workplace learning with the safeguards and interpretive depth of professional teacher education.

The framework is consistent with international accounts that emphasize institutional coordination and the complementarity of school-based and workplace learning (Deissinger, 2015; Euler, 2013; OECD, 2010). Its distinctive contribution is the articulation of a preschool-specific operating cycle within Uzbekistan's 4+2 policy. The weekly microcycle provides a practical answer to the theory-practice problem: coursework defines the lens for inquiry, the preschool provides a consequential context, the mentor supports participation, and reflection returns experience to academic study. Integration is therefore recursive rather than sequential.

The framework also clarifies the role of the preschool organization. Treating the preschool merely as a placement site risks reproducing a hierarchy in which the university designs and the workplace implements. A dual partnership instead recognizes the preschool's situated expertise and gives it a defined role in task design and assessment. This can improve the relevance of teacher preparation and create a feedback channel through which workforce needs shape the program. At the same time, university oversight remains necessary to prevent local routines from being accepted uncritically and to maintain research-informed, inclusive, and ethical standards.

Several implementation risks should be anticipated. University and preschool schedules may not align. Qualified mentors may be insufficient for student numbers. Mentor workload may grow without recognition. University assignments and workplace tasks may duplicate rather than reinforce each other. Assessment may vary across settings, and digital reporting may displace meaningful practice. These risks can be mitigated through placement planning, mentor incentives, task banks, calibration meetings, sample-based portfolio moderation, and a minimum-evidence principle for digital documentation.

## 8 Practical Implications

At the institutional level, universities should establish a partnership council or coordination group that includes preschool leaders and mentors. Its functions should include approving competence maps, reviewing practice capacity, monitoring mentor preparation, resolving recurring implementation problems, and evaluating annual evidence. Preschools should be selected not only for proximity but also for the quality of pedagogical practice, leadership support, safeguarding, and mentor capacity.

At the curriculum level, program teams should replace generic practice diaries with task sequences that are linked to specific course outcomes. A task bank may include observation of developmental environments, design of play-based learning, language facilitation, inclusive adaptation, family communication, documentation of child progress, team collaboration, and reflective analysis of ethical dilemmas. Each task should state the permitted degree of independence and the evidence required.

At the assessment level, partners should introduce common rubrics, narrative feedback, and periodic moderation. A professional portfolio can integrate plans, anonymized observation evidence, mentor records, student reflection, and examples of revision after feedback. The portfolio should reveal change over time rather than merely accumulate completed forms.

## 9 Limitations and Future Research

The study is limited by its conceptual design. The framework has not yet been evaluated through comparative or longitudinal data, and its feasibility may vary across public and non-state preschools, urban and rural areas, and institutions with different mentor capacity. The analysis also draws partly on vocational education literature developed outside early childhood education; although the principles were adapted to preschool practice, their local enactment requires empirical scrutiny.

Future research should pilot the framework across several university-preschool partnerships and examine implementation fidelity, mentor workload, student competence growth, perceived coherence between coursework and practice, and graduate transition into employment. Mixed-method designs could combine rubric-based performance data, portfolio analysis, observation, interviews, and institutional indicators. Studies should also investigate which forms of mentor preparation and digital evidence provide the greatest educational value with the lowest administrative burden.

## 10 Conclusion

Uzbekistan's 4+2 policy creates an important structural opportunity to strengthen preschool teacher preparation, but regular workplace attendance alone does not constitute dual education. Effective dual preparation requires institutional co-responsibility, a shared competence profile, integrated curriculum tasks, one-to-one mentoring, joint assessment, and a feedback mechanism that changes subsequent teaching and practice.

The framework developed in this article connects these elements in a recursive operating cycle. It begins with policy and partnership conditions, translates academic outcomes into authentic preschool tasks, organizes guided workplace participation, captures evidence through mentoring and assessment, and returns analysis to curriculum and partnership decisions. Its intended outcome is not simply a student who has spent more time in a preschool, but an ethical, reflective, collaborative, and practice-ready professional who can justify pedagogical decisions and continue learning from evidence. The framework offers a clear basis for institutional implementation and for future empirical evaluation of dual preschool teacher education in Uzbekistan.

## Declarations

Funding To be completed by the author.

Conflict of interest To be completed by the author.

Author contribution To be completed by the author.

Data availability This conceptual study did not generate an empirical dataset.

Ethics statement The study involved document analysis only and did not include human participants or personal data.

## References

1. Berulava, M. N. (1998). Integratsiya soderzhaniya obshchego i professionalnogo obrazovaniya v proftekhuchilishchakh Teoretiko metodologicheskiy aspekt [Integration of general and vocational education content in vocational schools A theoretical and methodological perspective]. Tomsk University Press. [In Russian]
2. Deissinger, T. (2015). The German dual vocational education and training system as good practice. Local Economy, 30(5), 557-567. https://doi.org/10.1177/0269094215589311
3. Euler, D. (2013). Germany's dual vocational training system A model for other countries. Bertelsmann Stiftung.
4. Fedorov, V. A. (2001). Professionalno pedagogicheskoe obrazovanie Teoriya empirika praktika [Professional-pedagogical education Theory, evidence, and practice]. Ural State Vocational Pedagogical University Press. [In Russian]
5. Fedorov, V. A., & Komleva, S. V. (2017). Professional training in microenterprises Modelling educational-professional interaction. The Education and Science Journal, 19(2), 124-144. https://doi.org/10.17853/1994-5639-2017-2-124-144
6. Kirillovskiy, A. N. (2007). Razvitie sistemy srednego professionalnogo obrazovaniya obedinennoy Germanii 1990 e gody nachalo XXI veka [Development of the secondary vocational education system in reunified Germany The 1990s to the beginning of the twenty-first century] (Doctoral dissertation abstract). Mari State Pedagogical Institute. [In Russian]
7. Ministry of Preschool and School Education of the Republic of Uzbekistan. (2025, August 20). Order No. 301 on improving mechanisms for organizing teacher preparation through dual education and the system for assessing student knowledge. [In Uzbek]
8. Ministry of Preschool and School Education of the Republic of Uzbekistan. (n.d.). Curriculum and practice documents for bachelor's program 60110200 Preschool Education. [In Uzbek]
9. OECD. (2010). Learning for jobs OECD reviews of vocational education and training. OECD Publishing. https://doi.org/10.1787/9789264087460-en
10. President of the Republic of Uzbekistan. (2025, April 28). Decree No. PF-73 on measures to further improve the teacher preparation system. https://lex.uz/docs/7499721 [In Uzbek]
11. Republic of Uzbekistan. (2020, September 23). Law No. O'RQ-637 on education. https://lex.uz/docs/5013007 [In Uzbek]
12. Sopegina, V. T. (2012). Integratsiya pedagogicheskikh i spetsialnykh distsiplin pri podgotovke masterov proizvodstvennogo obucheniya [Integration of pedagogical and specialist disciplines in the preparation of vocational training instructors] (Doctoral dissertation abstract). Yekaterinburg. [In Russian]