



INTERDISCIPLINARY INTEGRATION AS A MEANS OF DEVELOPING FUTURE TEACHERS' DIDACTIC COMPETENCE

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Abstract

This article examines interdisciplinary integration as a means of developing future teachers' didactic competence within English language teacher education at pedagogical universities in Uzbekistan. Didactic competence is understood as the ability to transform subject knowledge into coherent instruction through informed planning, classroom interaction, assessment, and adaptation to learners' needs. The article adopts a conceptual and analytical approach to explore connections among linguistics, language teaching methodology, educational psychology, pedagogy, and digital literacy. It considers how these disciplines can contribute to shared instructional problems while retaining their distinct perspectives. The analysis proposes a framework centred on interdisciplinary learning objectives, problem-based lesson design, collaborative microteaching, guided analysis of teaching practice, and reflective assessment. Particular attention is given to tasks that require prospective English teachers to explain language features, anticipate learning difficulties, select appropriate instructional strategies, and interpret evidence of learner understanding. Multilingual classroom contexts and cooperation between university educators and school mentors inform the framework's intended application. The article argues that interdisciplinary integration can create opportunities for students to connect disciplinary understanding with professional judgement when assignments, feedback, and teaching experiences are coherently organized. The proposed relationships remain theoretical rather than empirically demonstrated. The framework provides a basis for curriculum development and subsequent research



into the feasibility and contribution of interdisciplinary learning to future English teachers' didactic competence.

Keywords: Interdisciplinary integration, didactic competence, future teachers, English language teacher education, pedagogical reasoning, curriculum coherence, problem-based lesson design, collaborative microteaching, reflective assessment, teaching practicum.

Annotatsiya

Ushbu maqolada O'zbekiston pedagogika universitetlarida bo'lajak ingliz tili o'qituvchilarining didaktik kompetentligini rivojlantirish vositasi sifatida fanlararo integratsiya o'rganiladi. Didaktik kompetentlik asoslangan rejalashtirish, sinfdagi o'zaro muloqot, baholash va o'quvchilar ehtiyojlariga moslashtirish orqali fan bo'yicha bilimlarni yaxlit o'qitish jarayoniga aylantirish qobiliyati sifatida talqin etiladi. Maqolada tilshunoslik, til o'qitish metodikasi, ta'lim psixologiyasi, pedagogika va raqamli savodxonlik o'rtasidagi aloqalarni o'rganish uchun konseptual-tahliliy yondashuv qo'llaniladi. Ushbu fanlarning o'ziga xos yondashuvlarini saqlagan holda umumiy didaktik muammolarni hal etishga qo'shadigan hissasi ko'rib chiqiladi. Tahlil asosida fanlararo ta'lim maqsadlari, muammoga asoslangan dars loyihalash, hamkorlikdagi mikrodarslar, pedagogik amaliyotning yo'naltirilgan tahlili va reflektiv baholashga tayanuvchi model taklif etiladi. Bo'lajak ingliz tili o'qituvchilaridan til xususiyatlarini tushuntirish, o'rganishda yuzaga kelishi mumkin bo'lgan qiyinchiliklarni oldindan aniqlash, tegishli o'qitish strategiyalarini tanlash va o'quvchilar tushunganligini ko'rsatuvchi dalillarni talqin qilishni talab etadigan topshiriqlarga alohida e'tibor qaratiladi. Modelni qo'llashda ko'p tilli sinflar sharoiti hamda universitet o'qituvchilari va maktabdagi amaliyot rahbarlari hamkorligi hisobga olinadi. Maqolada topshiriqlar, qayta aloqa va o'qitish tajribalari o'zaro muvofiq tashkil etilganda fanlararo integratsiya talabalarning fanlar bo'yicha bilimlarini kasbiy mulohaza yuritish bilan bog'lashiga imkon yaratishi asoslanadi. Taklif etilgan bog'liqliklar empirik jihatdan tasdiqlangan natijalar emas, balki nazariy qarashlar sifatida taqdim etiladi. Model o'quv dasturlarini takomillashtirish hamda fanlararo ta'limni amalga oshirish



imkoniyatlari va uning bo'lajak ingliz tili o'qituvchilarining didaktik kompetentligini rivojlantirishga qo'shadigan hissasini keyingi tadqiqotlarda o'rganish uchun asos bo'lib xizmat qiladi.

Kalit so'zlar: fanlararo integratsiya, didaktik kompetentlik, bo'lajak o'qituvchilar, ingliz tili o'qituvchilarini tayyorlash, pedagogik mulohaza yuritish, o'quv dasturining yaxlitligi, muammoga asoslangan dars loyihalash, hamkorlikdagi mikrodarslar, refleksiv baholash, pedagogik amaliyot.

Аннотация

В статье рассматривается междисциплинарная интеграция как средство развития дидактической компетентности будущих учителей английского языка в педагогических университетах Узбекистана. Дидактическая компетентность понимается как способность преобразовывать предметные знания в целостный процесс обучения посредством обоснованного планирования, взаимодействия в классе, оценивания и адаптации к потребностям учащихся. В статье применяется концептуально-аналитический подход для изучения связей между лингвистикой, методикой преподавания языков, педагогической психологией, педагогикой и цифровой грамотностью. Рассматривается вклад этих дисциплин в решение общих дидактических проблем при сохранении их самостоятельных научных перспектив. На основе анализа предлагается модель, включающая междисциплинарные образовательные цели, проблемно ориентированное проектирование уроков, совместное микропреподавание, направляемый анализ педагогической практики и рефлексивное оценивание. Особое внимание уделяется заданиям, требующим от будущих учителей английского языка объяснять языковые особенности, предвидеть учебные трудности, выбирать подходящие стратегии преподавания и интерпретировать свидетельства понимания учащихся. Предполагаемое применение модели учитывает условия многоязычных классов и сотрудничество между преподавателями университета и школьными наставниками. В статье обосновывается положение о том, что междисциплинарная интеграция может создавать возможности для



соединения дисциплинарных знаний студентов с профессиональным суждением при согласованной организации заданий, обратной связи и опыта преподавания. Предлагаемые взаимосвязи имеют теоретический характер и не представляются как эмпирически подтверждённые результаты. Модель служит основой для совершенствования учебных программ и дальнейшего исследования возможностей реализации междисциплинарного обучения и его вклада в развитие дидактической компетентности будущих учителей английского языка.

Ключевые слова: междисциплинарная интеграция, дидактическая компетентность, будущие учителя, подготовка учителей английского языка, педагогическое рассуждение, целостность учебной программы, проблемно ориентированное проектирование уроков, совместное микропреподавание, рефлексивное оценивание, педагогическая практика.

Introduction

Preparing future English teachers involves developing the ability to transform knowledge into instruction that supports learners' understanding and participation. Language proficiency is essential, but effective teaching also requires informed decisions about objectives, content, activities, interaction, and assessment. These decisions draw on several disciplines, including linguistics, pedagogy, educational psychology, and language teaching methodology. Interdisciplinary integration offers a way to connect these contributions within teacher preparation. Its relevance concerns how students use disciplinary knowledge together to address teaching problems, rather than how many subjects appear within their university programme.

Didactic competence is understood here as the capacity to plan, implement, evaluate, and adapt instruction through justified professional judgement. For future English teachers, it includes explaining language features accurately, selecting accessible examples, anticipating difficulties, organizing meaningful communication, and interpreting learner responses. These abilities require connections between knowledge of English and knowledge of learning. A student



who understands a grammatical structure must also decide how to introduce it, support its use, and assess whether learners can apply it appropriately.

Interdisciplinary integration differs from placing several disciplinary perspectives alongside one another without establishing relationships between them. An integrated task requires students to examine a shared problem and explain how different perspectives inform its solution. When designing a speaking lesson, for example, prospective teachers can connect linguistic objectives with psychological considerations concerning confidence, methodological decisions about interaction, and assessment criteria concerning communicative performance. Integration becomes visible when these contributions shape a coherent instructional design and when students justify their relationships.

Within pedagogical universities in Uzbekistan, the preparation of English teachers provides a context for examining such connections. The proposed approach considers multilingual classrooms, variation in learners' English proficiency, and the relationship between university coursework and school practice. These contextual dimensions create questions for instructional planning: how learners' existing linguistic resources can support understanding, how activities can accommodate different abilities, and how teachers can interpret participation. Addressing these questions requires disciplinary perspectives to inform decisions about particular learners and teaching situations.

Nevertheless, interdisciplinary learning cannot be assumed to emerge automatically from exposure to different courses. Students need tasks that require connections, feedback that examines those connections, and opportunities to revise their work. University educators also need shared understandings of the professional abilities being developed. Without such coordination, assignments may encourage students to reproduce disciplinary terminology while leaving its instructional relevance unexplored. Integration therefore requires attention to curriculum design, learning activities, assessment, and mentoring relationships.

Lesson design, collaborative microteaching, and guided practicum analysis provide possible settings for interdisciplinary work. These activities allow students to move between theoretical explanations and instructional action. They can also make professional reasoning available for discussion by requiring students to explain their choices and reconsider them through feedback.



This article examines interdisciplinary integration as a means of developing future English teachers' didactic competence through conceptual analysis. It explores the relationships among disciplinary knowledge, shared instructional problems, and reflective professional learning. Its purpose is to propose a framework for pedagogical university education and establish directions for subsequent investigation, without claiming that the proposed approach has already produced measured improvements in students' competence.

Methods

This article adopts a conceptual and analytical methodology to examine interdisciplinary integration as a means of developing future English teachers' didactic competence. Its focus is the relationship between disciplinary knowledge and professional decision making within pedagogical university education. Uzbekistan constitutes the intended context of application, rather than the location of an empirical investigation. No participants were recruited, classroom intervention implemented, or student performance measured. The methodology supports developing a framework and identifying propositions for subsequent investigation, without estimating effectiveness or establishing causal relationships between integration and competence development.

The analysis is organized around two operational definitions. Interdisciplinary integration refers to the purposeful connection of concepts, methods, and perspectives from different disciplines in addressing a shared instructional problem. Didactic competence refers to the ability to plan, enact, assess, and adapt teaching through justified decisions that respond to learner needs. These definitions distinguish integration from the inclusion of several subjects within a programme. They also distinguish competence from subject knowledge alone, requiring attention to how prospective teachers use knowledge when making instructional choices.

The disciplinary scope includes linguistics, English language teaching methodology, educational psychology, pedagogy, and digital literacy. Each domain is considered through its contribution to teaching situations. Linguistics informs explanations of language and interpretations of learner errors. Methodology informs the organization of practice and communication.



Educational psychology contributes perspectives on learning, motivation, and development. Pedagogy informs instructional purposes and classroom organization. Digital literacy supports informed resource selection. The analysis examines relationships among these contributions rather than proposing that disciplinary boundaries should disappear.

Relevant scholarship on teacher knowledge, curriculum coherence, reflective practice, assessment, and professional learning provides the conceptual foundation. Sources are used interpretively to clarify relationships and inform the framework. This process is a conceptual synthesis, not a systematic review. The article does not claim exhaustive database coverage, predefined screening procedures, or formal appraisal of empirical studies. Consequently, the literature supports the development of arguments and analytical categories, while conclusions concerning intervention outcomes remain beyond the scope of the methodology.

Analysis follows a sequence of conceptual clarification, instructional mapping, and framework construction. Conceptual clarification identifies the professional abilities associated with didactic competence. Instructional mapping considers how disciplinary contributions can inform shared tasks, such as explaining grammar, designing speaking activities, or interpreting assessment evidence. Framework construction translates these relationships into learning arrangements that require students to connect perspectives, justify decisions, enact selected activities, and revise their designs through feedback.

The proposed arrangements are examined against four criteria: relevance to an identifiable teaching problem, meaningful contribution from different disciplines, coherence between objectives and assessment, and opportunities for reflection and revision. Tasks that juxtapose terminology without influencing instructional decisions do not meet the analytical definition of integration.

Contextual interpretation considers multilingual learning environments, differences in proficiency, access to resources, and university–school cooperation. These are issues for local examination rather than verified institutional characteristics. Analytical credibility rests on transparent definitions, consistent reasoning, and explicit separation between proposed relationships and



observed findings. The resulting framework is intended for curriculum discussion and future empirical testing within English teacher education programmes.

Results

The conceptual analysis produced a framework linking interdisciplinary integration with five dimensions of future English teachers' didactic competence: interpreting instructional problems, connecting disciplinary perspectives, designing coherent lessons, enacting justified decisions, and evaluating teaching through evidence. These dimensions describe proposed relationships rather than measured student outcomes. The framework positions shared instructional problems as the organizing focus of interdisciplinary learning. Disciplinary knowledge becomes integrated when it contributes to a defensible teaching decision and when students can explain how the contributions relate to learner needs, lesson objectives, and assessment expectations.

The first-dimension concerns interpreting instructional problems through multiple perspectives. A difficulty in classroom speaking, for example, can be examined in relation to linguistic resources, task demands, confidence, participation opportunities, and classroom organization. The analysis indicates that interdisciplinary tasks should require students to consider alternative explanations before selecting an instructional response. This creates a distinction between identifying an observable difficulty and assuming its cause. Within the proposed framework, interpreting problems constitutes the starting point for connecting disciplinary understanding with subsequent planning and evaluation. The second-dimension concerns establishing meaningful connections among disciplines. Linguistics contributes understanding of language structures and use, while educational psychology contributes perspectives on learning and motivation. Teaching methodology and pedagogy inform activity design and classroom interaction. Digital literacy informs resource selection and accessibility. The analytical relationship is one of coordinated contribution: each perspective addresses an aspect of the shared problem. Integration is represented by the explanation connecting these contributions, rather than by the number of disciplinary concepts mentioned in an assignment.



The third-dimension concerns coherent lesson design. The framework requires students to connect intended learning outcomes with content, activities, support, and assessment. An interdisciplinary lesson planning task might ask students to justify vocabulary selection linguistically, sequence activities methodologically, accommodate participation psychologically, and establish assessment criteria pedagogically. The resulting lesson plan provides an artifact for examining whether these contributions form a consistent instructional relationship. Coherence therefore becomes an analytical criterion for distinguishing purposeful integration from a collection of unrelated activities or theoretical explanations.

The fourth-dimension concerns enactment through collaborative microteaching and guided school practice. Microteaching provides opportunities to rehearse selected instructional decisions and discuss their implications with peers. School practice introduces learner responses and classroom circumstances that may require adaptation. The framework connects both settings through explanations of what students intended, what occurred, and which changes they considered appropriate.

The fifth-dimension concerns reflective assessment. Lesson plans, observation records, feedback, and revised designs can make students' reasoning available for examination. Assessment should consider disciplinary accuracy, the relevance of connections, instructional coherence, and responsiveness to evidence. Revision becomes a means of examining whether feedback influences subsequent decisions.

Across these dimensions, university educator coordination and mentor cooperation emerge as enabling arrangements. Shared tasks and criteria can establish continuity between coursework and practice. For pedagogical universities in Uzbekistan, the framework identifies possible directions for organizing interdisciplinary learning while leaving feasibility and effectiveness open to investigation. It establishes no numerical gains, comparative advantages, or causal effects. Its results consist of analytical categories and proposed relationships for curriculum development and empirical research.



Discussion

The proposed framework suggests that interdisciplinary integration can support didactic competence when disciplinary perspectives contribute to solving identifiable teaching problems. Its educational significance lies in making connections between knowledge and instructional judgement explicit. Future English teachers need to understand language, learning, and classroom organization, but they also need opportunities to consider these domains together. The framework therefore directs attention to the reasoning connecting a problem, its interpretation, and a planned response. This reasoning provides a focus for learning and assessment without implying that integrated assignments necessarily produce effective classroom teaching.

A distinction concerns the depth of disciplinary contributions. Integration may become superficial if students mention psychological or linguistic concepts without showing how those concepts influence decisions. For example, identifying motivation as relevant to a speaking lesson is insufficient unless students explain how activity design addresses participation. Likewise, grammatical accuracy does not establish the accessibility of an explanation. Interdisciplinary assignments should therefore require evidence of relationships between disciplinary understanding and instructional choices. Maintaining disciplinary depth remains necessary because connections depend on accurate understanding of the perspectives being combined.

Problem interpretation presents another implication. Classroom difficulties can have several explanations, and prospective teachers should learn to examine competing interpretations. Limited participation might reflect insufficient vocabulary, unclear instructions, demanding interaction patterns, or uncertainty about expectations. An interdisciplinary approach can create space for considering these possibilities, but it cannot establish their relevance without classroom evidence. The framework consequently connects professional reasoning with inquiry: students formulate interpretations, examine available information, and justify a response. This relationship may help prevent the uncritical application of familiar techniques to different instructional problems.

The framework also raises questions about curriculum organization. Shared assignments require educators to agree on learning objectives, disciplinary



contributions, and assessment expectations. Such coordination can introduce demands on planning time and communication. Implementation should therefore consider manageable instructional problems and existing course relationships. A shared lesson design assignment could offer a starting point, followed by opportunities to revisit the same problem through microteaching and practicum reflection. Institutional feasibility depends on how these connections fit programme arrangements, rather than on the breadth of integration proposed in principle.

Microteaching and school practice contribute differently to this process. Peer teaching offers opportunities for rehearsal and discussion, while school practice provides encounters with learners whose responses may challenge initial assumptions. Neither setting independently establishes competence. Their proposed value comes from connecting preparation, enactment, observation, and revision through structured mentoring and feedback.

For English teacher education in Uzbekistan, contextual adaptation should examine linguistic diversity, proficiency differences, resource access, and placement partnerships. These considerations can shape task selection and expectations without assuming uniform conditions across universities. Students should explain how their designs respond to specific settings.

The conceptual methodology limits the claims that can be made. The framework identifies plausible learning relationships but does not demonstrate improvement or determine which arrangements work best. Future studies could examine changes in students' lesson designs, explanations, observed teaching, and feedback responses. Such research should investigate both disciplinary understanding and instructional application, while identifying the institutional conditions that support sustained interdisciplinary learning.

Conclusion

Interdisciplinary integration offers a conceptual basis for developing future English teachers' didactic competence by connecting disciplinary understanding with instructional judgement. Its central contribution is the organization of professional learning around teaching problems that require multiple perspectives. Linguistics, educational psychology, pedagogy, teaching



methodology, and digital literacy can inform different aspects of these problems. Their integration becomes educationally meaningful when students explain how these contributions shape objectives, activities, classroom interaction, and assessment. The article therefore presents integration as a purposeful relationship among forms of knowledge rather than their simultaneous inclusion within university coursework.

The proposed framework identifies five connected dimensions: interpreting instructional problems, relating disciplinary perspectives, designing coherent lessons, enacting justified decisions, and evaluating teaching through evidence. Together, these dimensions describe a sequence through which prospective teachers can connect understanding with action and revision. They also provide categories for examining student work. A lesson plan, teaching performance, or reflective account can be considered in terms of disciplinary accuracy, relevance of connections, instructional coherence, and responsiveness to learner evidence. These categories remain proposals for educational use and empirical examination.

Developing this approach requires learning arrangements that make professional reasoning visible. Shared lesson design tasks can require students to justify decisions through more than one disciplinary perspective. Collaborative microteaching can provide opportunities to enact selected decisions and discuss alternatives. Guided school practice can introduce classroom responses that require reconsideration. Reflective assessment can connect feedback with revised planning. The contribution of each arrangement depends on how it relates to the others and on whether students receive support in interpreting the relationships among knowledge, instructional action, and learner understanding.

For pedagogical universities in Uzbekistan, the framework provides a starting point for reviewing connections across English teacher education programmes. Its application should consider existing course structures, opportunities for educator coordination, mentor involvement, and the demands of local teaching settings. Multilingual learning environments and differences in English proficiency can inform the selection of shared instructional problems. Institutions should examine which arrangements are feasible within their resources and partnerships. The framework does not prescribe identical implementation across



universities or assume that interdisciplinary learning can replace sustained study within individual disciplines.

The conceptual methodology establishes limits. No intervention was undertaken, and no changes in students' competence were measured. The article cannot demonstrate effectiveness, comparative advantage, or causal impact. Subsequent research should examine whether students develop more coherent and defensible instructional decisions through interdisciplinary learning. Evidence might include lesson designs, observed teaching, reflective explanations, and responses to feedback collected over time. Such investigation should also consider disciplinary understanding and contextual influences, ensuring that apparent integration is distinguished from the superficial use of theoretical terminology.

The direction established by this analysis is the preparation of teachers who can bring different forms of knowledge into purposeful dialogue when addressing learner needs. Supported opportunities for interpretation, design, enactment, and revision can provide a foundation for that preparation. Developing this foundation requires sustained cooperation among university educators, students, and school mentors, together with empirical inquiry into how interdisciplinary integration operates within English teacher education and contributes to professionally justified teaching decisions.

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