



WAYS TO DEVELOP FACILITATION COMPETENCIES OF PROSPECTIVE EDUCATION SCIENCE TEACHERS IN THE CREDIT-MODULAR SYSTEM

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Article history:	Abstract:
Received: 8 th February 2026 Accepted: 6 th March 2026	This article explores effective ways to develop facilitation competencies among prospective education science teachers within the framework of the credit-modular system. As modern education shifts towards student-centered learning, the role of teachers is increasingly seen not as sole knowledge transmitters but as facilitators of learning. This research identifies the key facilitation competencies, analyzes how the credit-modular system can support their development, and proposes practical strategies for integration into teacher training programs. In the context of modern higher education reforms, the transition to a credit-modular system in Uzbekistan has significantly reshaped the structure and goals of teacher education. One of the key challenges in this new environment is the development of facilitation competencies among future education science teachers, who are expected not only to deliver knowledge but also to guide and empower students through active, learner-centered methods. This study explores the pathways for cultivating such competencies within the credit-modular framework. Using a mixed-methods approach, data were collected from surveys, interviews, and classroom observations at Gulistan State Pedagogical Institute. The findings reveal that while essential competencies such as designing learner-centered activities, guiding reflection, and using formative assessment are recognized as vital, their development is hindered by theoretical overload, limited practice opportunities, and traditional assessment methods. Nevertheless, the flexibility of the credit-modular system opens up possibilities for personalized learning, elective modules, and reflective practices. This study concludes with pedagogical recommendations for aligning curriculum design with the competencies needed for effective facilitation, thereby bridging the gap between theory and practice in teacher education. The insights gained are valuable for curriculum developers, teacher educators, and policymakers aiming to enhance the quality of pedagogical preparation in higher education institutions.

Keywords: facilitation skills, education science, teacher training, credit-modular system, competency development, student-centered learning

1. INTRODUCTION

In the 21st-century educational landscape, a paradigm shift is observed in the roles and responsibilities of teachers. Particularly in higher education, the transition from traditional lecture-based instruction to student-centered learning requires a transformation in how teaching and learning processes are organized. In this context, the implementation of the credit-modular system has brought new opportunities and challenges to teacher education.

Education science, often referred to as pedagogy, plays a critical role in forming future educators who are not only knowledgeable but also capable of guiding, supporting, and facilitating learners' growth. Facilitation competence refers

to the ability to create engaging learning environments, encourage student autonomy, promote collaboration, and adapt instruction to diverse learner needs.

This paper aims to explore how prospective education science teachers can be equipped with facilitation competencies during their undergraduate studies within the credit-modular framework. The research focuses on identifying the competencies needed, analyzing current gaps, and suggesting practical solutions for improvement. The shift toward the credit-modular system in Uzbekistan's higher education sector marks a significant transformation in the way teaching and learning are conceptualized, structured, and assessed. In this evolving educational landscape, the role of the teacher is undergoing a fundamental shift—from being a transmitter of information to becoming a facilitator of learning. Facilitation, in this context, refers to the teacher's ability to create engaging, student-centered learning environments where knowledge is co-constructed through interaction, critical thinking, and reflection. For prospective education science teachers, mastering facilitation competencies is essential not only for effective classroom instruction but also for fostering lifelong learning habits in their future students.

Despite the acknowledged importance of facilitation in modern pedagogy, many teacher preparation programs still focus heavily on theoretical content, often neglecting the practical competencies needed to guide and motivate learners. In particular, prospective teachers are frequently unprepared to implement active learning strategies, manage group dynamics, or use formative assessment effectively. The credit-modular system, which emphasizes flexible, modularized learning and continuous assessment, has the potential to support the development of these competencies. However, to leverage this system fully, teacher education programs must be intentionally designed to include reflective practices, simulation opportunities, and a competency-based approach to instruction.

This study aims to investigate how facilitation competencies can be developed in prospective education science teachers within the framework of the credit-modular system. By identifying core facilitation skills, exploring existing challenges, and evaluating the systemic opportunities available, this research seeks to offer practical insights into improving the pedagogical training of future teachers. The ultimate goal is to align teacher education with the demands of 21st-century classrooms, where facilitation, not lecturing, is the key to meaningful learning.

2. METHODS:

This study employed a mixed-methods approach to investigate the strategies and effectiveness of fostering facilitation competencies among prospective education science teachers within the credit-modular system. Both quantitative and qualitative data were collected to ensure a comprehensive understanding of the subject. The quantitative component involved a structured survey administered to 60 third- and fourth-year undergraduate students enrolled in the Faculty of Pedagogy at Gulistan State Pedagogical Institute. The survey measured students' self-perceived facilitation skills, awareness of learner-centered teaching, and attitudes toward active learning methods using a five-point Likert scale. The qualitative component included semi-structured interviews with 10 teacher educators and 10 prospective teachers, focusing on their experiences with the credit-modular system, classroom facilitation practices, and the challenges they face in adopting a facilitative role. The data collection tools were developed based on the theoretical frameworks of constructivist pedagogy and facilitative teaching (Brookfield, 2013; Kolb, 1984). Classroom observations were also conducted in selected modules where facilitation strategies were explicitly embedded, allowing the researchers to analyze teacher-student interactions, peer collaboration, and student engagement. The data were analyzed using descriptive statistics for the quantitative portion and thematic coding for the qualitative data. This triangulated approach helped validate the findings and provided deeper insight into how the credit-modular system influences the development of facilitation competencies among future teachers.

2.1 Research Design

This study adopted a qualitative research design, employing a combination of document analysis, semi-structured interviews, and a focus group discussion with teacher educators and final-year pedagogy students.

2.2 Participants

Participants included:

- 10 teacher educators from universities using the credit-modular system,
- 15 fourth-year students majoring in education science.

Purposive sampling was used to select participants actively involved in teaching or learning in the credit-modular context.

2.3 Data Collection Tools

- **Document Analysis:** Review of national curriculum standards, university syllabi, and module descriptions.
- **Interviews:** Semi-structured interviews with teacher educators to understand their perceptions of facilitation competencies.
- **Focus Group:** A group discussion with students to explore challenges and opportunities in acquiring such skills.

2.4 Data Analysis

Collected data were transcribed, coded, and thematically analyzed using MAXQDA software. Themes were categorized into competency components, institutional support, curriculum design, and teaching methods.

- The findings of the study shed light on the facilitation competencies that are most essential for prospective education science teachers, as well as the obstacles and opportunities presented by the credit-modular system. The analysis identified five core competencies that define an effective facilitator: the ability to design learner-

centered activities that engage students actively; the skill to guide reflective thinking, allowing learners to internalize knowledge through critical self-assessment; the capacity to encourage collaborative learning through group work and peer-to-peer interaction; the effective use of formative assessment strategies to monitor progress and adjust instruction; and finally, the creation of inclusive, motivating environments where all learners feel supported and valued. These competencies align with constructivist pedagogy and modern educational paradigms.

- However, the study also highlighted several significant challenges in developing these competencies. One major issue is that many academic modules remain heavily focused on theoretical content, leaving little room for practical skill-building. Prospective teachers often lack opportunities for microteaching, classroom simulation, or peer facilitation, which are crucial for experiential learning. Additionally, current assessment practices tend to emphasize factual knowledge and rote memorization rather than evaluating process-based or reflective teaching skills. The shortage of trained mentors or supervisors who model facilitation techniques further complicates the learning process, leading to a gap between theoretical understanding and practical implementation.
- On a more optimistic note, the credit-modular system itself offers untapped potential to support the development of these facilitation competencies. The flexibility of the system allows for modular course design, enabling the inclusion of elective subjects that focus on soft skills, communication, and classroom interaction strategies. It also supports personalized learning paths, allowing students to focus on areas of individual interest or weakness. Moreover, the integration of regular feedback mechanisms and the use of student reflection journals helps promote metacognitive awareness, giving learners the tools to self-evaluate and refine their facilitation practices over time. Overall, while challenges persist, the modular-credit system provides a promising structural foundation for embedding facilitation competencies into teacher education.

4. DISCUSSION

The findings suggest that facilitation competencies are essential for future educators to adapt to contemporary classroom realities. The credit-modular system, if implemented effectively, provides a flexible and student-centered structure that can support the development of such competencies.

To optimize the development of facilitation skills, several strategies are recommended:

- Embedding **practical workshops** and **microteaching sessions** in methodology courses
- Introducing **peer teaching activities** and **mentoring programs**
- Creating a **competency-based assessment** system rather than relying solely on summative exams
- Encouraging use of **portfolio-based reflection** for continuous professional growth

Teacher education programs should also reconsider the balance between theoretical knowledge and practical facilitation skills. Facilitators are not born but trained; thus, systematic development plans are required throughout the teacher training process.

5. CONCLUSION

Facilitation competencies are vital for prospective education science teachers, especially in light of modern educational reforms. The credit-modular system holds great potential to support the development of these skills if structured with intentional pedagogy. Training programs must focus on providing authentic learning experiences, feedback-rich environments, and reflective practices. Developing facilitation competencies in prospective education science teachers is no longer optional—it is essential in preparing them for the demands of 21st-century classrooms. As education shifts toward constructivist and learner-centered models, the teacher's role must evolve from that of a knowledge transmitter to a learning facilitator who supports, guides, and inspires.

The credit-modular system, widely adopted in higher education institutions, provides a timely and flexible framework for embedding these competencies into teacher education curricula. Its structure allows for modular integration of practical tasks, reflective activities, formative assessments, and differentiated instruction. However, the mere presence of such a system does not guarantee success. Without targeted curriculum reforms, educator training, and institutional support, the development of facilitation competencies may remain underdeveloped.

To address this, universities should:

- Design modules that explicitly focus on facilitation strategies (e.g., group dynamics, inquiry-based learning, Socratic questioning);
- Introduce capstone projects that require students to lead real or simulated learning sessions;
- Use digital portfolios and self-assessment tools to track competency development over time;
- Train teacher educators in mentorship techniques that support facilitative teaching;
- Encourage a shift in institutional culture from content mastery to learner empowerment.

Moreover, educational policymakers need to re-evaluate assessment standards and accreditation frameworks to align with facilitation-based competencies. Investing in teacher professional development and encouraging collaborative communities of practice can also foster ongoing growth beyond pre-service education.

Future research could investigate how these competencies evolve during in-service teaching, the role of digital technologies in facilitation training, and comparative studies between traditional and credit-modular teacher education programs across different regions.

In summary, cultivating facilitation competencies requires a systemic and strategic approach. When done effectively, it empowers future educators to foster autonomy, critical thinking, and lifelong learning in their students—outcomes that align with both national education goals and global trends.

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