The Role Of Pedagogical Communication In Developing The Professional Qualities Of Technology Teachers

Saydanova Dilafruz Sadirdinovna
Independent Researcher,
Andijan State Pedagogical Institute (ADPI)

Abstract
This article explores the development and enhancement of professional qualities in technology subject teachers, emphasizing the demands of the modern educational landscape. The author argues that a contemporary technology teacher must go beyond merely imparting knowledge and must be innovative, morally grounded, and pedagogically skilled. The discussion focuses on key professional attributes such as effective communication, ethical conduct, decision-making in challenging situations, and initiative. The paper also underscores the importance of modern pedagogical technologies, peer experience exchange, hands-on seminars, and training programs as strategic tools for enhancing teacher competence. This article serves as a methodological guide to promote professional growth among technology educators and improve the overall quality of education.
Keywords: technology subject, professional qualities, pedagogical competence, innovation, methodological approach, teacher, self-development.

Introduction

Among the key requirements of the modern education system, the professional competence, pedagogical skills, and personal qualities of the teacher occupy a crucial place. In today's world, where science, technology, and innovation are developing rapidly, it is essential to equip students not only with theoretical knowledge but also with practical skills and innovative thinking. This is particularly important for technology teachers, who are expected to develop students' knowledge and skills in areas such as modern production, fundamentals of engineering, work culture, environmental safety, and career guidance.

Technology as a subject stands out for its practical orientation. Through this subject, students develop creativity, problem-solving thinking, teamwork, design, and production skills. Such an approach requires the teacher to be constantly engaged in self-development, stay updated with technological advancements, and apply innovative teaching methods.

A teacher's professional qualities are not limited to their knowledge level but also include their ethical stance, communication culture, initiative, and openness to new methodological approaches. The role of the technology teacher has evolved today—not only as an educator but also as a motivator, mentor, advisor, and developer of engineering thinking.

From this perspective, enhancing the professional qualities of technology teachers plays a significant role not only in their teaching effectiveness but also in influencing students' future career choices, attitudes toward labor, and life goals. This article analyzes in detail the professional qualities of technology teachers, methods of developing these qualities, the effectiveness of using pedagogical technologies, and international experience-based approaches. It also provides a scientific-theoretical basis for the importance of self-development, professional development courses, interactive methods, and reflection processes in improving professional qualities.

Main Part
Modern Professional Qualities for Technology Teachers
1. **Digital Literacy and Technological Adaptability:** Today, teachers must

effectively utilize digital tools, including interactive presentations, online assessment systems, and digital learning resources.

2. **Innovative Pedagogical Approaches:** Applying innovative methods like Project-Based Learning, gamification, and flipped classrooms helps increase student engagement.

3. **Collaboration and Experience Sharing:** Teachers enhance their teaching methods through professional collaboration, including seminars, conferences, and online platforms.

Methods for Developing Professional Qualities

1. **Professional Development and Lifelong Learning:** Courses and continuous training help teachers stay up to date with new pedagogical approaches and technologies.

2. **Mentoring and Coaching Programs:** Support from experienced mentors accelerates the professional growth of novice teachers by helping them acquire practical skills faster.

3. **Online Learning Platforms:** Teachers can strengthen their knowledge and skills through flexible and convenient online courses and webinars.

Integrating Innovative Technologies into the Educational Process

1. **Use of Artificial Intelligence (AI):** AI tools like MagicSchool enable personalized teaching, real-time feedback, and monitoring of student performance.

2. **Virtual and Augmented Reality (VR/AR):**
These technologies allow students to explore topics in a visual and interactive manner, enhancing understanding.

3. **3D Printing and Robotics:** Technologies like 3D printing and robotics help develop students' engineering and design skills.

Recommendations for Teachers

• **Continuous Self-Development:** Stay informed about new technologies and pedagogical approaches.

• **Adapting to Student Needs:** Apply individualized teaching based on students' unique characteristics.

• **Use of Innovative Methods:** Try new teaching strategies to make lessons engaging and effective.

• **Utilizing Digital Tools:** Efficiently integrate digital technologies into lessons.

Professional Competence

Professional competence refers to the mastery and practical application of knowledge, skills, and abilities required for professional activity. It does not only involve acquiring individual knowledge or skills but encompasses the integration of these across various domains. Furthermore, competence requires continual enhancement of professional knowledge, learning new information, understanding important societal demands, and the ability to find, process, and apply information in practice.

Professional competence is particularly evident in:

1. Complex situations
2. Unclear or ambiguous tasks
3. Using contradictory information
4. Having an action plan for unexpected scenarios

Key components of professional competence include:

• **Special (or professional) competence**
• **Technological competence**
• **Extreme competence**
• **Psychological, methodological, informational, creative, innovative, communicative competencies**

Social competence is the ability to actively engage in social interactions and communicate effectively within the professional environment.

Special competence involves preparedness for pedagogical activity, problem-solving, realistic evaluation of outcomes, and systematic development of professional skills. This forms the basis for demonstrating other types of competence such as psychological, methodological, informational, creative, innovative, and communicative.

Personal competence refers to continuous professional growth, increasing qualification levels, and expressing internal potential in professional activities.

Technological competence involves mastering advanced technologies, tools, and techniques that enrich professional and pedagogical practices.

Extreme competence refers to the ability to make rational decisions and act effectively in emergency situations (natural disasters, technical failures, or pedagogical conflicts).

Pedagogical Mastery and Abilities
The effectiveness and success of the educational process largely depend on the teacher's pedagogical skills. In one definition, "ability" is described as an individual psychological characteristic that enables a person to easily master a specific activity.

Talented teachers often possess the following exceptional abilities:

1. Ability to perform multiple activities simultaneously (listening, observing, reading, writing, thinking, communicating)
2. Simultaneous awareness of multiple events (e.g., listening to one student while monitoring others)
3. High curiosity and a strong desire to understand even minor phenomena
4. High neurobiological activity of the brain (very little rest time, quick resolution of uncertainties)
5. Rich vocabulary and imagination
6. Strong memory (e.g., memorizing large texts such as epics in one reading)

In modern conditions, teachers are required to:

- Possess professional competence
- Continuously work on self-development
- Learn and adapt to ever-evolving knowledge
- Creatively prepare engaging and informative lessons
- Quickly process and deliver valuable information effectively to students

This requires not only pedagogical mastery but also creativity and digital competence, which are now essential in the profession.

Conclusion
In today's digital age, developing the professional qualities of technology teachers is one of the key factors in modernizing the education system. A technology teacher must not only be a subject matter expert but also an adept user of modern teaching methods and digital tools, while striving for both personal and professional growth.

Professional qualities, including knowledge, skills, and competencies, have a direct impact on the quality of the teaching process. A teacher's openness to innovation, digital literacy, creativity, and decision-making in complex situations are critical for adapting to the evolving nature of technology education.

The scientific and theoretical foundations, international experiences, and modern technologies (e.g., artificial intelligence, virtual reality, online platforms) discussed in this article highlight the immense potential in developing professional qualities of technology teachers.

Moreover, initiatives such as professional development programs, mentoring, collaborative teaching, and the implementation of advanced educational technologies are central to preparing well-rounded educators.

In conclusion, enhancing the professional qualities of technology teachers is a continuous process. It goes beyond providing new knowledge—it includes the constant self-renewal of the teacher, accountability for educational quality, and readiness to embrace innovations. This approach not only determines the teacher's professional success but also plays a decisive role in shaping students into competitive, modern thinkers.

References

Azizxo'jayev A.A., Ziyayeva D.I. Pedagogik texnologiyalar va pedagogik mahorat. – Toshkent: TDPU, 2020.

Xolboyeva M.T. Kasbiy ta'lim nazariyasi va amaliyoti. – Toshkent: Fan va texnologiya, 2021

Mamajonov A.S. Innovatsion ta'lim texnologiyalari. – Andijon: AQTU, 2019.

ISTE (International Society for Technology in Education). https://www.iste.org 5. Google for Education. Teacher Center. https://edu.google.com/intl/ALL_us/for-educators/

Digital Promise. Providing Professional Development for Teachers. https://digitalpromise.org

National Center for Education Statistics (NCES). Technology in Schools: Suggestions, Tools, and Guidelines for Assessing Technology in Elementary and Secondary Education. https://nces.ed.gov

MagicSchool AI. https://www.magicschool.ai 9. Andrew Ng, Kira Learning: AI agents in teaching. Business Insider, 2025. https://www.businessinsider.com

Houghton Mifflin Harcourt. Innovative Educational Technology Examples. https://www.hmhco.com/blog/innovative-educational-technology-examples-to-use-in-the-classroom

EdTech Hub. Teacher Professional Development. https://edtechhub.org/our-topic-areas/teacher-professional-development/

Kaltura. Innovative Teaching Strategies to Improve Student Engagement. https://corp.kaltura.com