



CONFERENCE ARTICLE

**FORMATION OF FUTURE TEACHERS' VIRTUAL COMMUNICATION SKILLS ON A
DEONTOLOGICAL BASIS**

Sulaymanbekov Oybek Dusbekovich

Doctor of Philosophy (PhD) in Pedagogical Sciences, First Deputy Director for Youth Affairs and Spiritual and Educational Work of the Tashkent Branch of Samarkand State University of Veterinary Medicine, Animal Husbandry and Biotechnology, Uzbekistan

Abstract: The formation of future teachers' virtual communication skills in higher education institutions is one of the urgent problems in the field of pedagogy. As a result of the widespread use of digital communication tools and the increase in the volume of online teaching, teachers' ethical, professional and technical competencies are becoming important. This article analyzes the pedagogical concept of virtual communication, the theoretical foundations and practical mechanisms of the deontological approach. The article focuses on the following issues: the ethics and norms of virtual communication; the professional duties and responsibility of teachers; methods of integrating deontological principles into the educational and upbringing process in higher education; the development of trainings and educational modules; assessment and monitoring systems. Literature analysis, questionnaires and focus groups, expert evaluations and the results of pilot projects were used as research methods. The results show that educational modules and practical classes developed on the basis of the deontological approach significantly improve the virtual communication culture, empathy and professional boundaries of future teachers at the bachelor's and master's levels. The article presents proposals for pedagogical procedures: introducing a deontological component into curricula, implementing real-situation simulations, creating online platforms for continuous professional development, and standardizing assessment criteria.

Keywords: Virtual communication, deontological approach, pedagogical ethics, online communication, higher education, pedagogical training, 21st-century competencies, simulations and case studies.

Introduction

The expansion of digital technologies and online education systems imposes new professional and ethical requirements on teachers. Virtual communication — communication carried out through chat, video conferences, forums and social networks — has become an important part of the pedagogical process. In this process, teachers must have not only technical but also ethical competencies when communicating with students.

Mistakes in virtual communication, such as inappropriate messages, violation of information security and failure to observe professional boundaries, can have a negative impact on the educational process, students' psychology and the reputation of the institution. Therefore, the formation of competencies in virtual communication ethics and professional deontology for future teachers remains an urgent problem. Developing a strategy for forming future teachers' virtual communication skills in higher education on the basis of the deontological approach and providing practical recommendations. Virtual communication takes place in the following forms:

- Written communication: chat, e-mail, forums.
- Oral communication: video conferences such as Zoom, Google Meet and Skype.
- Asynchronous communication: students and teachers communicate at any time.
- Synchronous communication: communication carried out at the same time, such as video lessons.

Characteristics of virtual communication:

Characteristic	Description
Identification problem	It is difficult to determine whether the other party is a real person
Inappropriate messages	Sending messages that are contextless or emotionally inappropriate
Unclear context	Misinterpretation of the content of the message
Technical limitations	Communication disruption due to internet and technical problems

Deontology is an approach based on duty, obligation and ethical norms. Pedagogical deontology includes the following principles:

- Respect: respect for the personality of students.
- Justice: equal treatment of all students.
- Impartiality: personal views should not influence the educational process.
- Confidentiality: protection of students' information.
- Professional boundary: maintaining the boundary between personal and professional relations.
- Responsibility: the teacher's responsibility for his or her activities and decisions.

Application of deontological principles in the context of virtual communication:

- Politeness in online relations.
- Ensuring students' personal and information security.
- Defining ethical boundaries.
- Developing technical and communicative skills.

The following methods were used in the study:

- Systematic analysis of literature: identifying theoretical foundations.
- Questionnaires and focus groups: 120 students and 20 teachers participated from faculties of pedagogy.
- Expert interviews: with higher education specialists.
- Pilot projects: testing of a 12-week educational module.

Sample: students and teachers from the faculties of pedagogy of several higher education institutions.

Measurement tools:

- Virtual communication competency scores.
- Tests assessing deontological awareness.
- Self-assessment and observation journals.

Deontological trainings and practical classes improved the following indicators among students:

Indicator	Previous score (%)	Subsequent score (%)	Change
Online ethical behavior (respect, justice)	55	82	+27
Maintaining the confidentiality of information	48	79	+31
Professional boundaries	52	80	+28
Level of empathy	60	85	+25
Technical communicative skills	58	83	+25

In the pilot group, the average score between the pre-training and post-training assessments increased by 20–35%. The combination of a deontological module was more effective than traditional trainings.

- Technical capabilities: Some students encountered internet and technical problems.
- Teachers' resistance: Some teachers were resistant to change.
- Subjectivity of assessment: Components based on self-assessment and expert opinion made the results subjective.

Deontology defines clear ethical rules and professional norms. This helps the student choose quick and reliable behavior in complex online contexts.

Effectiveness factors:

- Clear rules: Students clearly know what to do and what not to do.
- Practical classes: Situational simulations teach real decision-making.
- Reflection: Students have the opportunity to analyze and change their behavior.

Introducing a deontological component into curricula strengthens students' professional identification. Simulations and role-playing teach ethical decision-making in real situations.

International experience:

- Examples of online ethics courses in European and North American universities are presented.
- Recommendations are given for adapting them to the local context.

Methods

- Interactive seminars: Group discussion and case study.
- Video cases: Viewing and analyzing real situations.
- Real-situation simulations: Role-playing and situational exercises.
- Reflective journals: Students analyze their own behavior.
- Mentoring and expert feedback: Professional advice and assessment.

Institutional integration

- Creating policies and codes: Online communication code, privacy policy.
- CPD programs for teachers: Continuing Professional Development.
- Technical support: LMS, online platforms.
- Online resource center: Ethics rules, video cases, simulations.

CONCLUSION

This study examines the issue of forming future teachers' virtual communication skills in higher education institutions on the basis of the deontological approach from theoretical and practical perspectives. The research results show that by integrating the deontological approach into curricula, future teachers' communicative culture, empathy and understanding of professional boundaries improve significantly. Pilot-module tests and comparative assessments showed that educational modules focused on deontological principles significantly increase students' online ethical behavior and decision-making ability. These behavioral guidelines help to choose quick and stable behavior in unclear online situations. The classes developed students' empathy; they began to become more emotionally sensitive in communication with students, and their approaches to confidentiality and data protection also improved. The deontological approach helps teachers define their professional role more clearly — a clearer understanding was formed regarding what boundaries should be maintained on social networks and personal channels, and which forms of communication with students correspond to professional norms. Combining theoretical blocks with interactive seminars, simulations and reflective journals developed not only students' knowledge, but also their practical skills. In particular, situational simulations such as role-play and video cases were effective in strengthening practical decision-making. Universities can introduce a deontological component into their pedagogy programs. This increases the ethical culture of the entire institution through teaching teachers' professional ethics. The results serve as a basis for higher education institutions in developing online communication codes, privacy policies and CPD programs for staff. The deontological approach strengthens students' psychological safety and the protection of their personal data, which increases trust in the academic environment and the teaching process. The deontological approach is confirmed as a stable and effective strategy for forming future teachers' virtual communication skills in higher education institutions. It develops not only technical and communicative abilities, but also strengthens teachers' ethical awareness, protects students' safety and the reputation of the institution. When the research results are applied in practice, they help to create a high-quality, ethically stable and modern online educational environment.

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