

INTERDISCIPLINARY CONNECTION IN TEACHING A FOREIGN LANGUAGE TO ENGINEERING STUDENTS

Urunova Shakhlo

Senior Teacher, Doctor of Philosophy in Pedagogical Sciences (PhD) of

Andijan Branch of Kokand University

e-mail: urunovashahlo23@gmail.com

Abstract

One effective way to improve language learning and student engagement is to incorporate multidisciplinary ideas into foreign language instruction. Teachers can create a more comprehensive learning environment that promotes cognitive growth and cultural understanding by tying language education into disciplines like history, science, math, and the arts. The theoretical underpinnings of interdisciplinary teaching are examined in this work, along with different approaches to integrating interdisciplinary tactics in language classes and the advantages and difficulties of doing so. This study highlights the importance of multidisciplinary links in developing learners' global and linguistic competency by showcasing successful case studies and best practices.

Keywords: Interdisciplinary teaching, foreign language acquisition, holistic learning, cognitive development, cultural awareness.

Introduction

Foreign language education has traditionally been taught in isolation, focusing primarily on grammar, vocabulary, and linguistic structures. However, modern educational paradigms emphasize the importance of interdisciplinary connections to enhance students' cognitive skills, motivation, and cultural understanding. Integrating foreign language instruction with subjects like history, science, and the arts fosters a deeper appreciation for the language and its cultural significance. This paper explores the interdisciplinary approach in teaching foreign languages, outlining its benefits, challenges, and practical applications.

Interdisciplinary teaching is grounded in constructivist learning theories, which emphasize active learning and the integration of knowledge across disciplines. L.Vygotsky's sociocultural theory highlights the importance of social interaction and cultural tools in language learning, making interdisciplinary approaches highly relevant [11]. Howard Gardner's theory of multiple intelligences also supports interdisciplinary teaching by addressing different learning styles and intelligences, such as linguistic, spatial, musical, and logical-mathematical intelligences [6].

Taking into account the orientation of students in the process of teaching a foreign language to professional activities, the fact that the teacher brings integration between disciplines, that is, interdisciplinary connection, into the course of the lesson serves to increase the professional competence of students [7].



"Through interdisciplinarity, we" understand" the integrity of the knowledge that allows students to transfer the knowledge, skills and skills acquired in the process of teaching one academic subject to another, " describes A.Zubkov [12].

Interdisciplinary integration is one of the modern methods in the pedagogical process, which, firstly, changes the content of Education, makes it more saturated and integrated, secondly, involves the introduction of modern information technology into the educational process, and thirdly, activates the cognitive activity of students, forms integrated professional thinking [2].

Therefore, in non-philological higher education institutions, it is necessary to take into account their professional needs and goals when choosing texts, situational dialogues, written assignments and exercises, terms suitable for professional activities, providing students with an interdisciplinary connection in teaching from a professional foreign language.

In the modern system of higher education, professional activity-oriented English is interpreted as an approach in teaching such a way that it is a separate approach that takes into account interdisciplinary connections, which are considered as a special didactic principle that embodies the purpose, task, content, method, means and forms of teaching various subjects.

T.V.Kreps believes that "modern education is based on integration processes, the future professionals must apply and use a complex of knowledge, skills and qualifications derived from the disciplines obtained in professional activities. The interdisciplinary approach is manifested in the organization of the course process, taking into account its specific aspects in the assimilation of knowledge, ideas and methods between disciplines" [9]. Hence, the goal of professional-oriented English is to create and introduce effective ways to develop professional competence in future professionals.

D.Israilova believes that taking into account the peculiarities of the specialty, the teacher should direct students according to the following strategies:

- a) work on special texts;
- b) development of communicative competence;
- d) teaching terms for a new profession;
- e) work on instructional materials capable of activating grammatical and lexical materials [7].

According to N.D.Galskova, teaching English for professional purposes should include the following components:

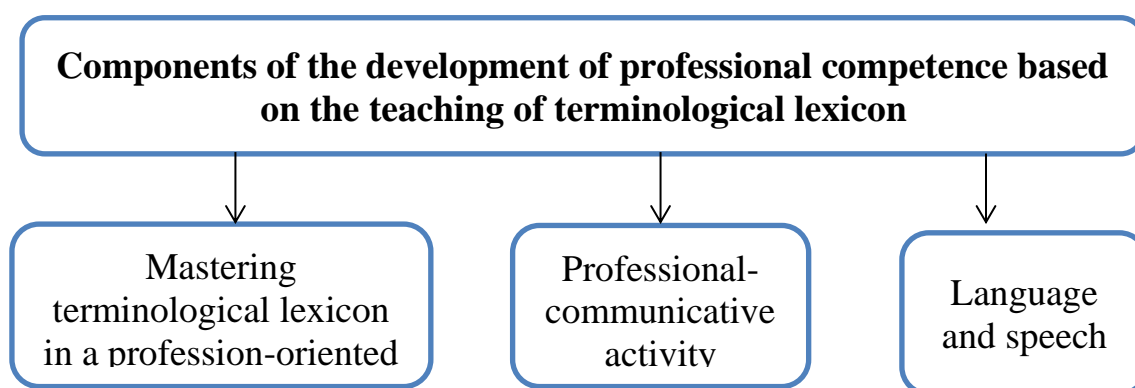
areas of activity, topics, situations, speech actions and speech materials of students in the development of professional competence;

a set of special (speech) skills that reflect professional situations in the study of a foreign language as a communicative tool,

skills to learn and use language material (grammatical, orthographic, phonetic, lexical,) for specialist purposes [4].

It is necessary to determine the complexity and viability of the development of professional competence by teaching terminological lexicon to students, to determine its structure and content in order to find effective ways to carry out this process. Summarizing the above points, the components of professional competence based on terminological lexicon were explained as follows (figure 2.2.1).





Mastering terminological lexicon in a profession – oriented language-refers to the use of knowledge about the phonetic, grammatical, lexical properties of terms. Professional-communicative activity is the interaction of people in one profession, their directed and active actions towards a professional goal with phenomena and objects of reality based on the exchange of professional information. Language and speech – a marked mechanism of communication, a sequence in the system and reality of language in the application of marked units. According to the image above (figure 2.2.1), it will be necessary for students to know the terminological lexicon necessary for professional-communicative activity and form professional-communicative skills in order to develop professional competence, as well as to use language and speech norms for this purpose.

T. Hutchinson and A. Waters argues that profession-oriented English refers to teaching a language with specific goals, which uses real situations to achieve the language's specific lexical and communicative competence so that students can use it in their future professions or understand issues related to their field [6]. The role of special purpose-oriented English (ESP) is to help students develop the skills they need to use in a specific professional setting and, alternatively, provide opportunities to develop specialist vocabulary and types of speech related to the subject area [6].

English (ESP), aimed at special purposes, is divided into the following types: 1.EAP (English for academic purposes)-English for academic purposes;2. EO P (English for occupational purposes) is English for professional purposes.

We came to the conclusion that the world recognized direction in teaching English is the basis for teaching professional English to students of the CLIL technology to engineering students. The term CLIL was first coined in 1994 by Used by D.Marsh. According to D.Marsh, some subjects within disciplines or disciplines are studied in a foreign language, and two goals are achieved in the process: to study the content of this discipline and simultaneously to study a foreign language [10].

Scientist K.Bentley discusses the following objectives of CLIL :

- by studying the program of introducing students to new concepts and ideas in a foreign language;
- greater use of a foreign language in the study of academic subjects;



- improvement of academic performance of students in specialist subjects and professional foreign language;
- instilling students' confidence in the use of a foreign language;
- creation of educational materials aimed at the formation of cognitive cognitive cognitive abilities;
- taking academic subjects as a basis in the first place in the development of educational material from a foreign language [1].

There are two approaches to implementing CLIL technology:

- 1) directed to academic science, in which the training is focused on the content of the science;
- 2) focused on linguistics, in which training focuses on learning a foreign language through information in science [1].

We think that these two approaches are consistent with the linguistic-oriented type, which is the 2nd approach in teaching English to robotics students. When planning classes, the teacher must necessarily combine the goals of academic science and language learning.

The introduction and active use of CLIL technology in teaching a foreign language is a functional approach through which extended educational tasks can be defined.

In CLIL training, future specialist personnel study not only a foreign language, but also a topic that is not related to the language. The use of this technology expands the worldview of future specialist personnel, which is focused on professional activities, and develops communication skills.

According to the CLIL educational technology, we note the need to develop professional-communicative skills in students with the main emphasis on terms, that is, students can not only lexically and semantically know terms related to student competence in generating terminological competencies, but also to be able to use terms in speech for a professional-communicative purpose, understand terms by reading them in, we propose that you need to develop skills that you can freely use in debates and make professional written statements.

Interdisciplinary connections in foreign language teaching offer a holistic approach to education, fostering linguistic proficiency, cognitive development, and cultural awareness. By integrating language learning with subjects like history, science, and the arts, educators can create meaningful learning experiences that prepare students for global challenges. While challenges exist, innovative teaching strategies, technology, and institutional support can help overcome these barriers. Future research should focus on developing effective interdisciplinary curricula and exploring new technological tools to enhance language education.

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