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USE OF MODERN METHODS IN GERMAN LESSONS FOR TECHNICAL DISCIPLINES

Qosimova Mavluda Navruzovna
Senior Lecturer at the Olmaliq Branch of Tashkent State Technical University.

Abstract
In today's digital educational landscape, foreign language teaching, especially German teaching for technical disciplines, is becoming increasingly important. This scientific article examines the use of modern methods in the teaching process and analyzes their effectiveness in technical courses. Particular attention is paid to digital teaching and learning formats, interactive forms of teaching and didactic concepts based on technical language. The aim is to show ways in which both the language competence and the professional competence of learners can be improved through innovative methods.

Introduction

The integration of the German language into technical study programmes is a central challenge. Technical terms, complex sentence structures and the need for subject-specific communication require adapted didactic concepts. In a globalised world of work, technical German is becoming a key qualification. This article is therefore dedicated to the question of how modern methods can improve the quality and efficiency of specialist German teaching. The role of digitalisation, international standards and the integration of subject-specific content will also be examined.

Theoretical Background

Foreign language didactics has undergone numerous methodological developments in recent decades. From the communicative turn to task-oriented learning and the use of digital media, many approaches were discussed. Technical language didactics, especially in the technical field, combines linguistic basics with application-oriented requirements. The relevance of subject-integrative learning is steadily increasing. Especially in the natural sciences and engineering, there is an increasing emphasis on targeted language teaching that is oriented towards real professional situations.

Didactic-Methodological Approaches

Modern methodology in technical German lessons is based on:
Action-oriented learning
Task-based forms of teaching
Project work and cooperative learning
Use of multimedia teaching materials
Technical text analysis and writing training
Simulation of professional communication situations
These approaches require a close connection between language and subject content. The teacher acts as a learning companion and feedback provider. A particularly effective method is

"Content and Language Integrated Learning" (CLIL), which conveys technical and linguistic content simultaneously. CLIL not only promotes language skills, but also analytical and cognitive skills.

Modern Technologies and Digital Media in Specialist German Lessons

Digital tools such as learning management systems (Moodle, ILIAS), collaborative platforms (Padlet, Etherpad), and video conferencing systems (Zoom, MS Teams) offer a wide range of possible applications:

Interactive grammar and vocabulary checker

Online research tasks

Digital Portfolios and Blogs

Simulation of e-mail and report writing

Language learning apps (e.g. Duolingo, Babbel)

Adaptive learning with AI-supported systems is becoming increasingly important in order to enable individualized language support. The integration of augmented reality (AR) and virtual reality (VR) allows immersive learning scenarios, e.g. in virtual laboratories or workshops. This promotes practical language learning. In addition, data analyses can visualize learning progress and address weaknesses in a targeted manner.

Practical Examples From Technical Universities

An analysis of teaching examples from technical universities in Germany, Austria and Switzerland shows:

Project-based units for the development of mechanical engineering vocabulary

Technical presentations in German as proof of achievement

Use of CAD programs with German user interface for language development

Cooperation with specialist lecturers to create subject-specific teaching materials

A particularly successful example is the cooperation between German lecturers and electrical engineering chairs, in which students describe and present complex circuits in German. In another project, computer science students developed an app whose interface and documentation were created in German. These projects not only promote language skills, but also interdisciplinary teamwork.

Empirical Study and Results

Within the framework of a study with 120 students of technical disciplines, three methods were compared: traditional grammar lessons, multimedia-supported lessons and project-oriented technical language lessons. The results show:Significant increase in performance in the project-oriented group (language and technical competence)

Increased motivation to learn with multimedia support

Greater sustainability with integrative method application

In addition, interviews were conducted with lecturers, who confirmed that the use of modern methods leads to better student participation. The quantitative analysis of the test results

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showed significant differences in favor of the digital and project-based groups. It was also found that female students benefit particularly from cooperative forms of learning.

Discussion

The results underline the necessity of a methodological reorientation of the teaching of German in subjects. In particular, the integrative approach, which combines digital, communicative and professional elements, is highly effective. Challenges lie in the didactic training of teachers and the technical equipment of educational institutions. Institutional support plays a special role: without strategic curriculum development and resource allocation, the use of modern methods remains selective. The sustainability of such measures must also be taken into account.

Conclusion and Outlook

Modern methods offer great opportunities for optimising the teaching of German in technical courses. However, systematic teacher training, curricular adaptations and the development of practical teaching materials are necessary for sustainable implementation. Future research should focus more on the effectiveness of AI-assisted language learning processes. It is also recommended to establish transnational studies and exchange programmes to identify best practices. Teaching German in technical disciplines has the potential to promote not only linguistic ability in the long term, but also professional mobility.

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