

# VIETTESOL INTERNATIONAL CONVENTION 2025

## TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

Dr. Thi Van Ha Nguyen, Prof. Dr. Vinh An Le, Dr. Thi Hong Tuyen Nguyen  
University of Transport and Communications

# OUTLINE

## TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

- ❑ INTRODUCTION
- ❑ RESEARCH METHODOLOGIES
- ❑ KEY FINDINGS
- ❑ PROPOSED SOLUTIONS
- ❑ CONCLUSIONS



# TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS



## UNIVERSITY OF TRANSPORT AND COMMUNICATIONS

### INTRODUCTION

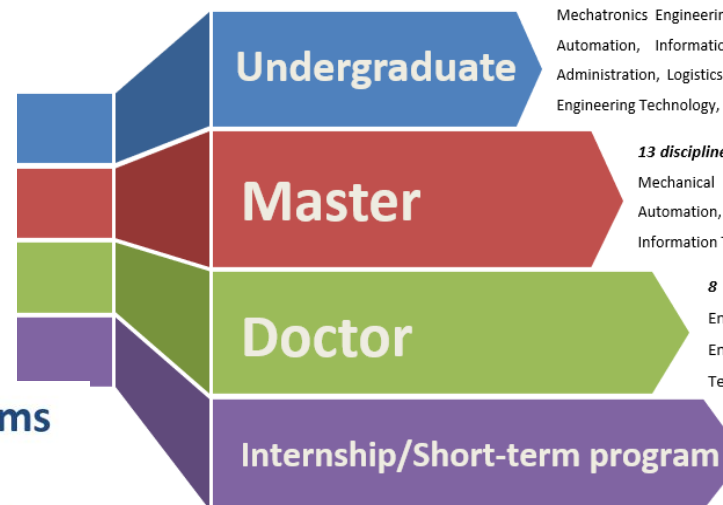
Generally, UTC is the largest and the oldest technical university in transport and communications field in Vietnam. Nowadays, UTC is up to become a multi-disciplinary university of engineering, technology and economics.

**25 disciplines, 73 majors:** Transportation Construction Engineering; Port, Coastal And Offshore Engineering; Civil Engineering, Architecture, Power Mechanical Engineering, Mechanical Engineering, Thermal Engineering, Automotive Engineering, Mechatronics Engineering, Electrical Engineering, Electronics and Telecommunications Engineering, Control Engineering and Automation, Information Technology, Transport Economics, Transport Operation, Accounting, Economics, Business Administration, Logistics And Supply Chain Management, Tourism And Travel Management, Finance and Banking, Transport Engineering Technology, Environmental Engineering, Construction Management, Applied Mathematics, Construction Economics

**13 disciplines, 32 specialized majors:** Transportation Construction Engineering, Infrastructure Engineering, Power Mechanical Engineering, Electronic Engineering, Telecommunications Engineering, Control Engineering, and Automation, Construction Management, Transport Organization and Management, Business Administration, Information Technology, Construction Engineering, Economic Management, Railway System Engineering

**8 disciplines, 17 specialized majors:** Transportation Construction Engineering, Special Construction Engineering, Engineering Mechanics, Control Engineering and Automation, Power Mechanical Engineering, Construction Management, Transport Organization and Management, Telecommunications Engineering

Students will be supervised by a professor in order to **do a research topic** or study some intended subjects/courses in English for **credits** in terms of urban civil engineering, transport civil engineering, accounting



### Advanced and High-quality Programs

#### Program taught in English

- Advanced Training Program in Civil Engineering
- Vietnamese-English Highway and Bridge Engineering
- Vietnamese-Japanese Urban Transport Works
- Vietnamese-English General Accounting
- Vietnamese-English Construction Economics of Transport Works
- Vietnamese-English Technology Information
- Vietnamese-English Business Administration
- Vietnamese-English Automotive Engineering

#### Program taught in French

- Vietnamese-French Highway and Bridge Engineering
- Vietnamese-French Construction Material and Technology

International Joint Program	Venue	Period
Master Program collaborated with Normandie (France) (1+1), Logistics and Port Management Major, Supply Chain Management	Hanoi & France	2 years
Undergraduate Program collaborated with Bedfordshire (England) (3+1), Construction Management Major	Hanoi & England	3 + 1 years
Undergraduate Program collaborated with Normandie (France) (3+1), Business Administration Major	Hanoi & France	3 + 1 years
Undergraduate Program collaborated with Korea, Bridge and High-Speed Railways Technology Major	Hanoi & Korea	2 + 2 years

# TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

## □ INTRODUCTION

- **Context:**
  - Deepening international integration
  - Universities offer specialized courses and programs in English & French for advanced, high quality and international joint programs
- **Goals:**
  - Improve access to international knowledge
  - enhance students' global competitiveness through access to international materials
  - Expand global career opportunities
  - Build soft skills & specialized language
- **Purpose of Study:**
  - To evaluate the practical implementation of foreign-language specialized programs at the technical universities.
  - To identify achievements, challenges, and propose solutions.



# TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

## □ RESEARCH METHODOLOGY

- **Qualitative research methodology:**
  - Literature review
  - In-depth Interview (Lecturers/students)
  - Focused Group (specialized Seminar for teaching specialized subjects in foreign languages in UTC)
- **Quantitative research methodology:**
  - Survey participants (lecturers, students)
  - Instruments: Structured questionnaire, 7-point Likert scale
  - Analysis methods: Descriptive statistics, reliability test (Cronbach's Alpha), Exploratory Factor Analysis (EFA), ANOVA



# OUTLINE

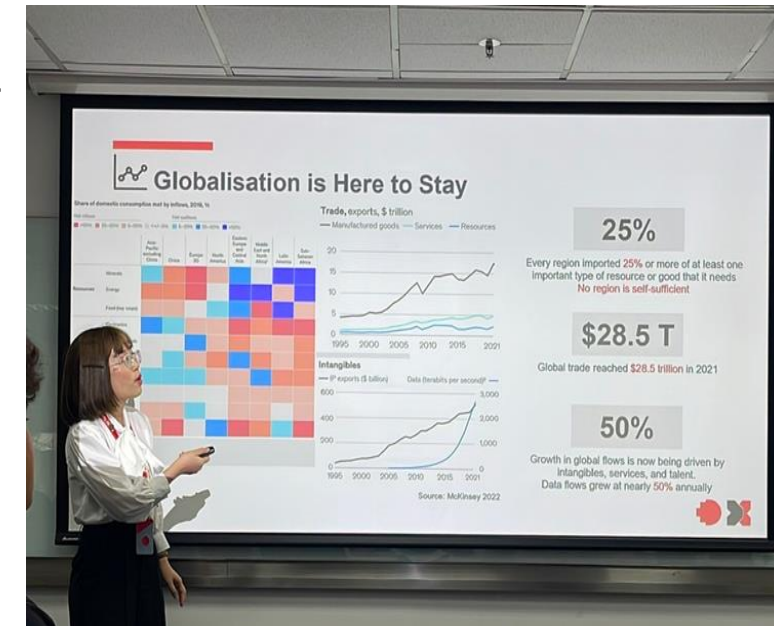
## TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

### □ KEY FINDINGS

- Qualitative research methodology:

- *From Lecturers' perspective (In-depth Interviews)*

- + The admission scores for specialized programs taught in foreign languages are usually lower than those of standard programs.
    - + Students' English proficiency is below the required level for specialized study.
    - + Lecturers sometimes have to use bilingual instruction for teaching and clarification.
    - + Students are lack of confidence in learning specialized foreign languages.
    - + Failure to systematize knowledge from general education to specialized subjects.
    - + Students are lack of perseverance and diligence in learning specialized foreign languages
    - + Students are lack of confidence and clear goals in studying specialized subjects in a foreign language



# OUTLINE

## TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

### □ KEY FINDINGS

- Qualitative research methodology:
  - *From Students' perspective (In-depth Interviews)*
    - + Lack of an environment to practice specialized foreign language skills.
    - + Psychological pressure when studying and presenting expertise in a foreign language.
    - + Difficulty in understanding technical documents and lectures delivered in a foreign language.
    - + Complex and highly specialized terminologies.
    - + Inability to keep up with the lecturer's speaking pace.
    - + Reluctance to speak or ask questions in class due to fear of grammatical and pronunciation mistakes.
    - + "Overload" from simultaneously understanding technical content and processing it in a non-native language.

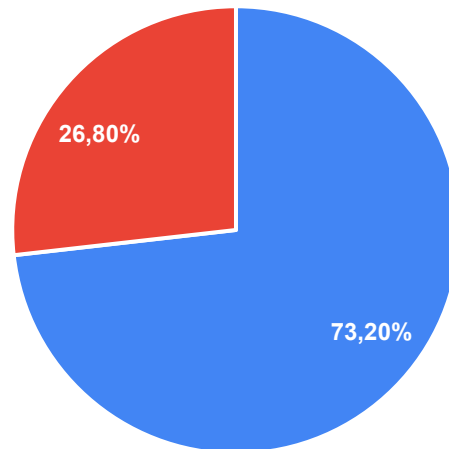


# OUTLINE

## TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

### KEY FINDINGS

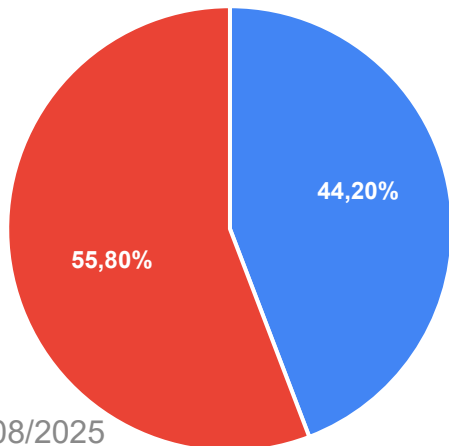
#### Quantitative research methodology:



366 Students  
134 Lecturers

*Survey participants: number of lecturers and students*

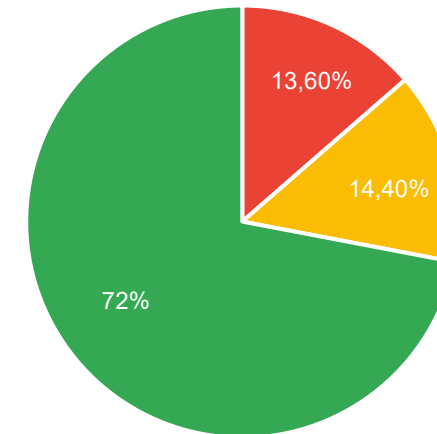
■ Student ■ Lecturer



■ Engineering major

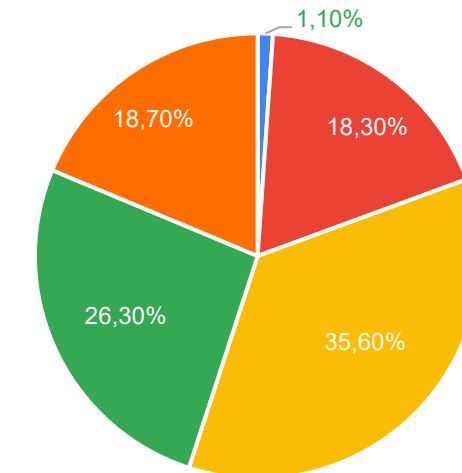
■ Economic and social major

*Students' major of studying*



■ Under 1 year  
■ 1 - 3 years  
■ 3 - 5 years  
■ Above 5 years

*Lecturers' years of teaching experience*



■ 1st year  
■ 2nd year  
■ 3rd year  
■ 4th year  
■ 5th year

*Students' current year of studying*





# OUTLINE

## TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

### □ KEY FINDINGS

ĐG1: I am confident in using a foreign language for teaching specialized subjects.

ĐG2: I have received formal training in specialized foreign language skills.

ĐG3: I am provided with teaching and learning materials in foreign languages.

ĐG4: I regularly update international materials and standards in my teaching.

ĐG5: I am capable of designing and delivering Content and Language Integrated Learning (CLIL) modules

ĐG6: I have access to software and technologies that support specialized teaching.

ĐG7: Students possess sufficient proficiency to follow lectures delivered in a foreign language.

ĐG8: I am able to effectively organize active learning activities (e.g., discussions, presentations) in a foreign language.

ĐG9: Teaching in a foreign language is encouraged and supported by the university.

Item	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Argee	Strongly Argee
ĐG1	2,81%	3,52%	15,49%	16,19%	17,6%	19,01%	25,38%
ĐG2	3,52%	6,33%	12,67%	21,83%	16,19%	16,9%	22,56%
ĐG3	4,22%	4,92%	16,9%	17,6%	18,3%	17,6%	20,46%
ĐG4	1,4%	6,33%	12,67%	16,19%	19,01%	20,42%	23,98%
ĐG5	1,4%	6,33%	13,38%	18,3%	18,3%	19,01%	23,28%
ĐG6	2,11%	5,63%	14,78%	14,78%	16,19%	20,42%	26,09%
ĐG7	4,22%	4,22%	20,42%	24,64%	16,19%	16,19%	14,12%
ĐG8	2,11%	7,04%	11,26%	16,19%	19,01%	17,6%	26,79%
ĐG9	2,81%	2,11%	16,9%	12,67%	16,9%	26,76%	21,85%

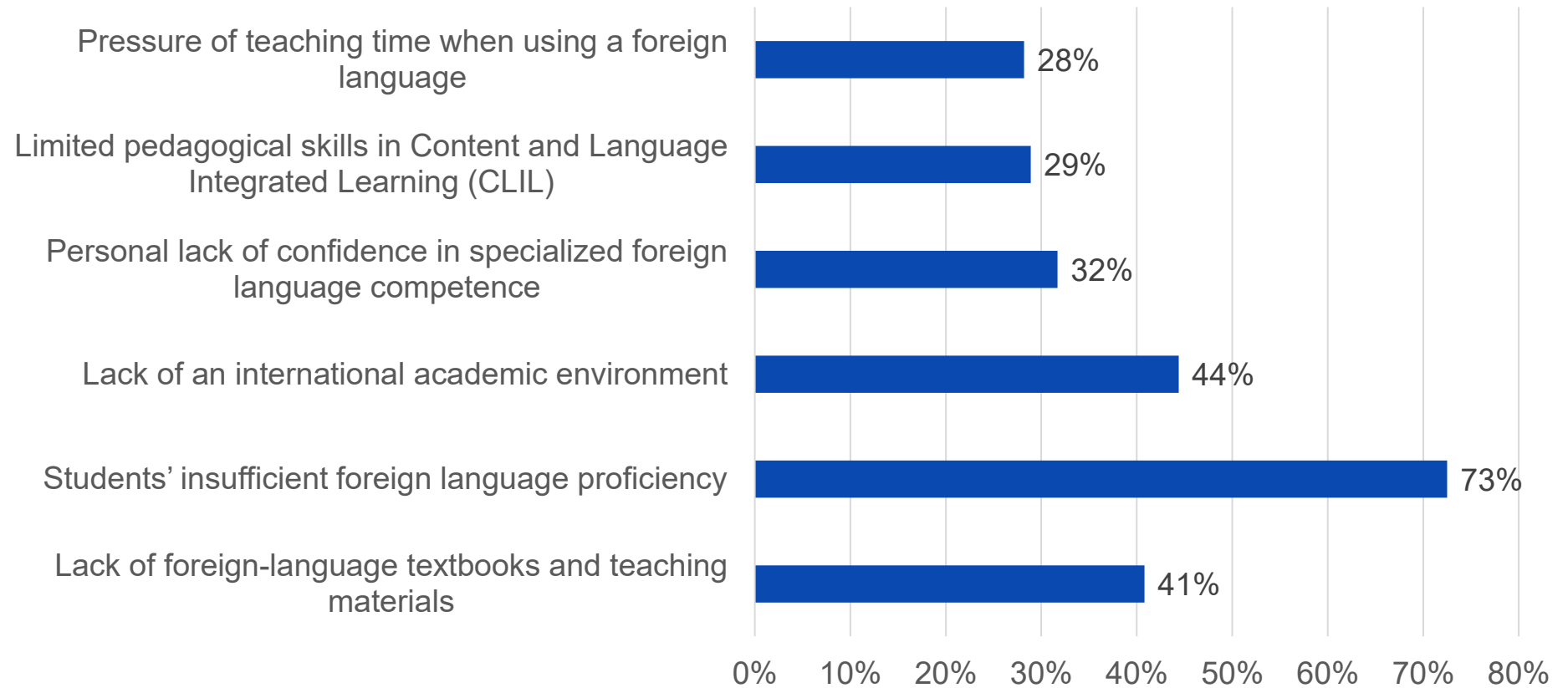
*Lecturers' Evaluation of Conditions and Teaching Competence in a Foreign Language*



# OUTLINE

## TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

### KEY FINDINGS



*Lecturer's Difficulties in Teaching Specialized Subjects  
in a Foreign Language*



# OUTLINE

## TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

### □ KEY FINDINGS

ĐG1: Lecturers use foreign languages clearly and comprehensibly.

ĐG2: Lecturers explain technical terms appropriately.

ĐG3: I can keep up with the content of lectures delivered in a foreign language.

ĐG4: Learning materials are sufficient and appropriate (textbooks, slides, videos, dictionaries, etc.).

ĐG5: The classroom organization helps me improve my specialized foreign language skills.

ĐG6: I have opportunities to participate in discussions, presentations, or group work in a foreign language.

ĐG7: Teaching in a foreign language enables me to access international knowledge, technologies, and standards

ĐG8: I find studying specialized subjects in a foreign language necessary and beneficial for my future career.

ĐG9: I receive adequate support from the university for foreign-language learning (clubs, learning resources, teaching assistants, etc.).

ĐG10: I am satisfied with the current quality of teaching specialized subjects in a foreign language.

Mean scores ranged from 4.74 to 5.13

**Disagreement:** Consistently around 23–26% in most items

Item	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
ĐG1	2.9%	6.7%	16.3%	14.4%	15.4%	15.4%	28.8%
ĐG2	2.9%	4.8%	18.3%	15.4%	13.5%	15.4%	29.8%
ĐG3	3.8%	6.7%	12.5%	23.1%	16.3%	17.3%	20.2%
ĐG4	1.0%	3.8%	15.4%	20.2%	10.6%	19.2%	29.8%
ĐG5	4.8%	1.0%	19.2%	14.4%	19.2%	19.2%	22.1%
ĐG6	3.8%	5.8%	14.4%	19.2%	13.5%	20.2%	23.1%
ĐG7	2.9%	3.8%	16.3%	19.2%	14.4%	19.2%	24.0%
ĐG8	2.9%	5.8%	11.5%	16.3%	13.5%	18.3%	31.7%
ĐG9	3.8%	3.8%	17.3%	16.3%	15.4%	18.3%	25.0%
ĐG10	3.8%	3.8%	17.3%	17.3%	12.5%	18.3%	26.9%

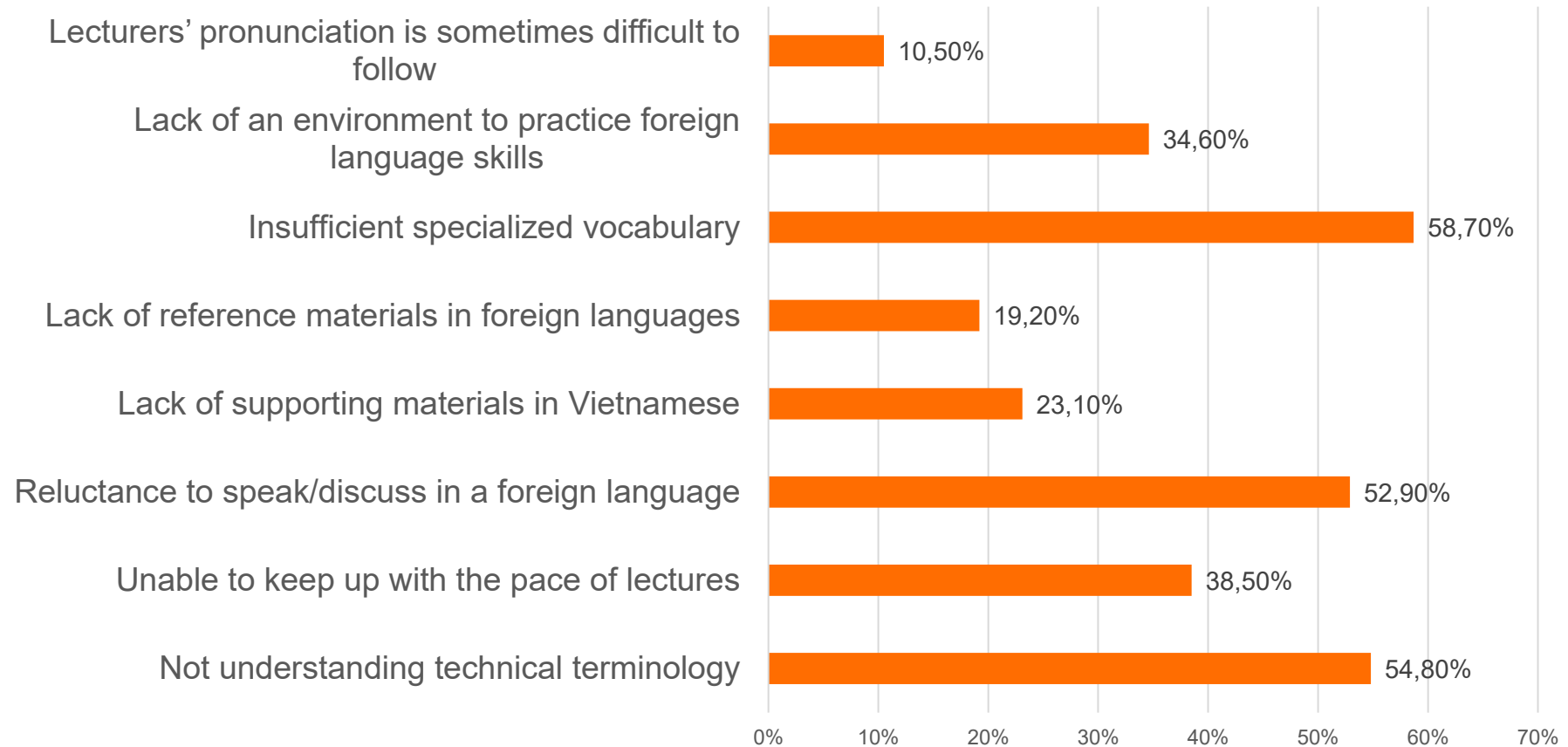
*Students' evaluation of teaching and learning specialized subjects in a foreign language*



# OUTLINE

## TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

### □ KEY FINDINGS



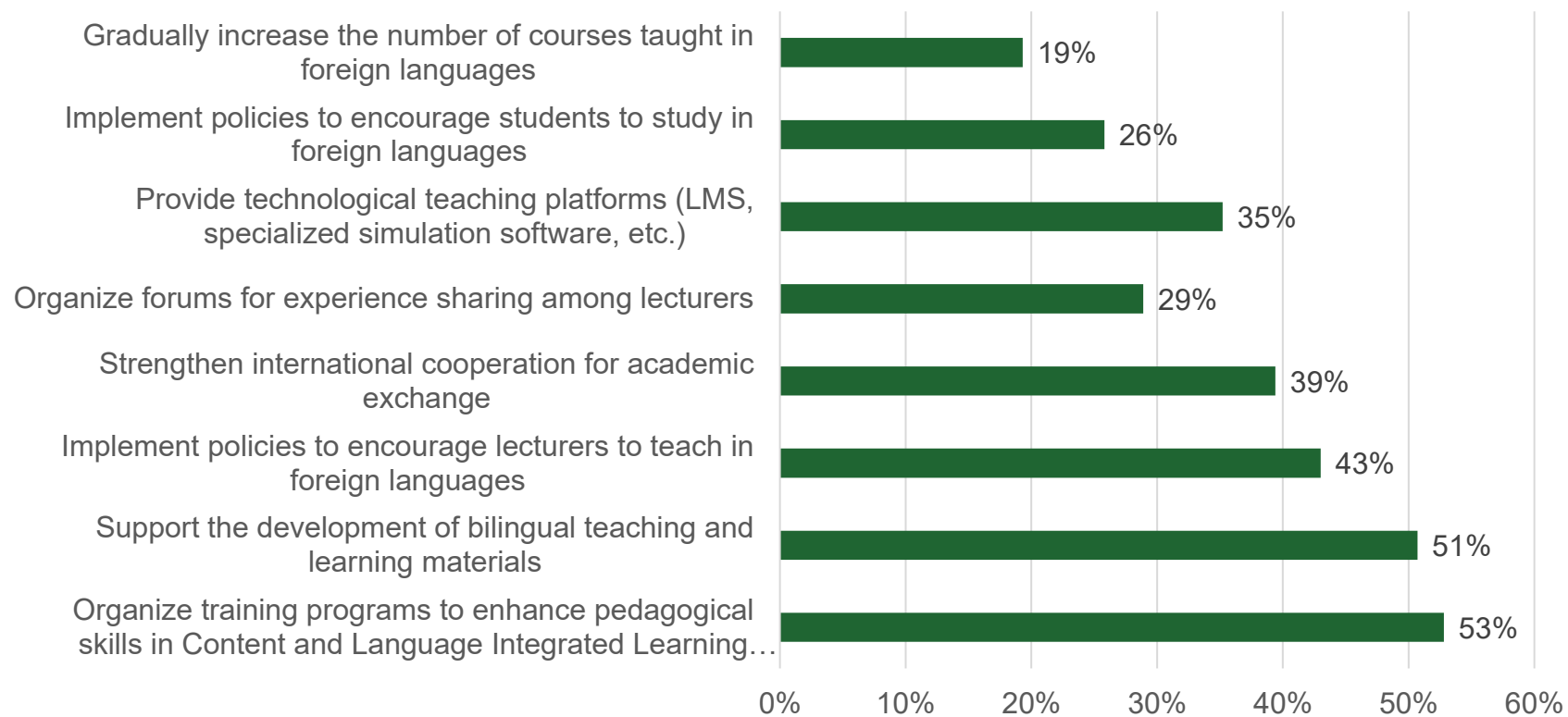
*Students' difficulties when studying specialized subjects in a foreign language*





# TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

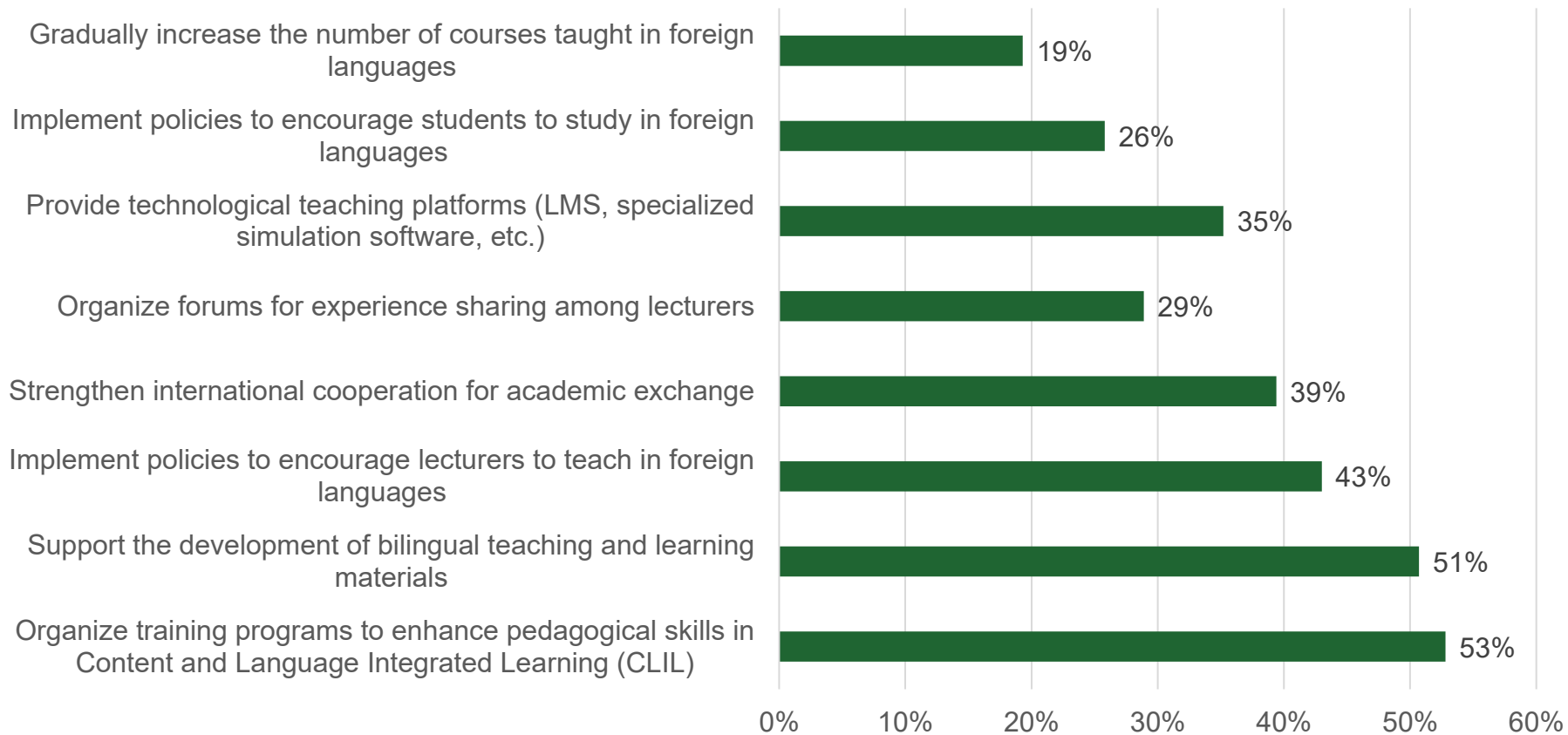
## □ PROPOSED SOLUTIONS



*Lecturers' Proposed Support from the University for teaching professional subjects in a foreign language*

# TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

## PROPOSED SOLUTIONS



*Lecturers' Proposed Support from the University for teaching professional subjects in a foreign language*



# TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

## ❑ PROPOSED SOLUTIONS (FOR LECTURERS)

- ✓ Develop lectures tailored to students' needs
- ✓ Enrich bilingual learning resources and exercises
- ✓ Combine e-lectures with traditional classroom teaching
- ✓ Provide frequent small exercises to promote interaction and reinforce specialized vocabulary
- ✓ Organize group discussions and presentations (with participation from all students)
- ✓ Update teaching content in line with international trends
- ✓ Apply flexible teaching methods
- ✓ Integrate digital technology and multicultural group learning
- ✓ Promote extracurricular activities and soft skills development



# TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

## ❑ PROPOSED SOLUTIONS (FOR STUDENTS)

- ✓ A scientific and systematic lesson structure, progressing step by step from basic to advanced levels with strong internal connections → leading to greater confidence and perseverance → enabling students to pursue their goals (Before lecture, In Lecture, After lecture).
- ✓ Not only learning English, but also mastering specialized knowledge and applying it in real-life situations (avoiding the problem of “studying a lot but remembering little”).
- ✓ Exposure to the language through listening and repetition, reading and writing, and interaction with others (lecturers, clubs, seminars, AI, etc.).
- ✓ Suitable and flexible approach of learning vocabularies; Practice daily and work hard;





# TEACHING SPECIALIZED SUBJECTS IN FOREIGN LANGUAGES AT TECHNICAL UNIVERSITIES: PRACTICES AND SOLUTIONS

## ❑ CONCLUSIONS

- ✓ Teaching specialized subjects in foreign languages is vital for global competitiveness.
- ✓ Our study shows both achievements and challenges from lecturers' and students' perspectives.
- ✓ With comprehensive institutional support, innovative teaching, and proactive student engagement, we can ensure more effective implementation of these programs.



# VIETTESOL INTERNATIONAL CONVENTION 2025

**THANK YOU VERY MUCH FOR YOUR ATTENTION**

Dr. Thi Van Ha Nguyen, Prof. Dr. Vinh An Lê, Dr. Thi Hong Tuyen Nguyen  
University of Transport and Communications