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Research Article

A Conceptual Framework for Investigating Determinants of ESP Learning Outcomes among Students at Vietnamese Universities of Economics and Business

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Abstract:

In Vietnam, English for Specific Purposes (ESP) is essential to economic globalisation, and educational institutions are often asked how to optimise ESP learning outcomes. The phrase "factors affecting ESP academic performance" has gained popularity in a number of studies as a response to that query. The paper's primary goal is to identify and evaluate the 5 groups of factors: students' psycho-cognition, students' knowledge, lecturer, context and technology. The study was conducted several business and economics majoring universities in Hanoi, Vietnam. The results have indicated that the research model's correctness is guaranteed by the lack of a substantial correlation between the independent variables. According to correlation study, context has little influence on learning outcomes, whereas knowledge and technology have the most effects. ESP researchers, decision-makers, curriculum designers, teachers, and students would all benefit from the findings of this paper.

1. Introduction

Global trade, media and entertainment, worldwide telecommunications, newspaper and book publishing, and—above all—the internationalisation of education have all made English the most widely spoken language in the world today. Proficiency in English generates countless opportunities in social, academic and professional environments (Cook, 2003; Crystal, 2003). International business and commerce are also conducted in English. Fluency in English communication is a requirement for many multinational corporations.

Vietnam faces numerous opportunities and risks in its trading with various international partners during the integration period. When Vietnamese enterprises expand their markets to many other nations, they face the challenge of competing with clients not just domestically as before but also worldwide. Because English is regarded as the standard language in commerce, companies must speak it at a particular level in order to conduct business with international partners. When any dispute arises between the two parties, the English contract will be used as a legal document to decide if it is right or wrong. Sometimes the damage comes from the Vietnamese side due to negligence in drafting the contract in English, using incorrect or missing language in the contract, or giving unclear instructions. In the field where they conduct business, people must be fluent in English due to its connection to international law. That is the reason why students should be equipped with English for Specific Purposes (ESP) at universities.

Emphasizing the role of learning English for economic purposes, Robertson's (2009) study pointed out that in the current global era, English for Economics and Business Administration has become a pioneering common language, opening up opportunities for cooperation, recruitment and international business. English for Business aims to prepare students for the global market and the main language of communication is English, especially at a time when the domestic job market is struggling to absorb the output of university graduates. Knowledge and skills, as well as language, are very

important factors in determining the employability of students in the future.

In the international business environment, business English will help to overcome language barriers and provide solutions to cope with communication challenges. Businesses with English-speaking executives and staff are better able to communicate and carry out business transactions, as well as better comprehend the market and partners. Businesses can readily share information with international partners, voice opinions and discuss business strategies, solve issues, and make wise decisions when they have strong specialised English abilities. In addition, using English facilitates communication and collaboration between parties and aids in the removal of linguistic obstacles.

Not only foreign-invested enterprises, domestic enterprises also require employees to meet specialized English proficiency depending on the job position. In fact, all jobs in any business require a lot of contact with English, such as email transactions, communication with foreign partners and customers, contract translation, translation of documents related to professional work. Therefore, when recruiting, in addition to the required documents in Vietnamese, many businesses require candidates to submit a job application in English, a resume and possibly a personal letter in English. With a good English profile, candidates will gain the sympathy of employers and have a higher chance of success. Because of the present trend, both domestic and multinational businesses can access human resources from other countries. Specifically, "outsourcing" or "remote working" is the most widely used type. As a result, employees who are fluent in business-related specialised English will have no trouble integrating and communicating with new coworkers. From there, collaborate to pursue the enterprise's shared objectives. In this process, corporate culture will gradually be built and developed in a more open direction. Using English in the enterprise also helps employees to research and analyze specialized documents, because almost all textbooks and specialized documents are written in English, thereby expanding the source of research information, quickly accessing new knowledge in the world.

To put it briefly, English facilitates effective communication between individuals from many nations and cultures. English helps people communicate globally and crosses gaps in business, tourism, and diplomacy. English is frequently used as a medium of instruction in educational and academic institutions around the world. Proficiency in English allows individuals to access a wealth of knowledge, resources and opportunities for further education, research and career advancement. English is an essential language for every person or organisation in the knowledge age, particularly in the digital and technical world of today. According to Kelly et al. (2022), English is affirmed to be essential for a person's intellectual development and work readiness.

2. Literature review

2.1. Learning outcomes

2.1.1. Definition of learning outcomes

The term learning outcomes originates from outcomes-based education, a structured educational model that involves the clear and specific identification, declaration, and assessment of student learning (Andrich, 2002).

Allen and Friedman (2010) emphasize three essential aspects of learning outcomes include cognitive, affective and behavioral aspects to prepare learners for social work and professional life.

Learning outcomes are also defined as a formal statement of what students are expected to learn in a given course. Learning outcome statements should address the specific knowledge, practical skills, areas of professional development, attitudes, higher-order thinking skills, etc. that course implementers expect students to develop, learn, or master in a given course (Suskie, 2004).

Nguyen Thi Thu An et al. (2016) has shown that students' learning outcomes reflect their learning and training process at university, and it also directly affects students' ability to find jobs, grasp business opportunities, promotion prospects, and postgraduate study in the future.

2.1.2. Learning outcomes and the stakeholders

Learning outcomes are important indicators of achievement in an academic course/program. Learning outcomes provide a clear idea of what a learner can achieve by taking a course/program. Regardless of the type of course, every course must be listed and written before the course begins to ensure that the course is well-designed. Based on the stated learning outcomes, the teaching environment, classroom activities, and assessment tools must be designed appropriately to conduct and complete the course successfully (Mahajan and Singh, 2017).

Jayanthi et al. (2014) argued that academic success of students affects their self-esteem, motivation and persistence; conversely, a failure in academic performance can lead to a reduction in the student’s chances of pursuing a higher degree and increase the cost of education. For lecturers, student performance

provides feedback that informs them of the appropriate strategies to be used in their teaching. Therefore, performance also helps course implementers avoid additional teaching by saving their time (Mahajan and Singh, 2017).

The assessment of student learning outcomes is important because it reflects the effectiveness of the institution (Hou, 2010) and is a benchmark for higher education institutions (Anderson et al., 2005). Indeed, this assessment reflects the essential elements for improving the quality of the university (Scott, 2011). Therefore, learning outcomes provide favorable conditions for measurement and help the measurement methods work effectively. The outputs help the accrediting body to evaluate whether the course/program meets the mission and goals of the institution where it is taught and to decide whether the desired goals of the institution have been achieved. Learning outcomes function as a type of evidence such as rubrics, charts and graphs of the overall learning objectives. (Mahajan and Singh, 2017).

2.2. English for Specific Purposes in economics majors

2.2.1. What is English for Specific Purposes (ESP)?

English for Specific Purposes originated in English-speaking countries and since the 1960s. Among the English language domains taught to foreign students before entering universities in English-speaking countries, English for Science and Technology was the most popular domain in the 1960s and 1970s (Van, 2008). Later, due to the realization that the English for Science and Technology domain was too difficult and not entirely practical for learners, pedagogical experts chose a new teaching content, using a more general English domain called English for Specific Purposes, the domain that we are currently using according to the translation of some people as TACN (English for Specific Purposes - ESP), including many different sub-domains such as English for Tourism; English for Information Technology; English for Economics, etc. The movement of learning English for Professional Purposes has been introduced to third world countries, especially to Vietnam since the 1980s. However, despite its attractive name, many universities in the country have encountered difficulties and challenges in many aspects. It is only capable of success in small areas of English for Occupational Purposes such as English for Tourism, Business English, Office English (basically still the general English or general specialized English).

English for Specific Purposes (ESP) is the name used to distinguish it from General English (GE). It is a separate field of study that was introduced into the field of English Language Teaching (ELT) in the 1960s. The biggest difference between ESP and GE lies in the target learners and the purpose of learning English. ESP learners are usually adults, and they study to serve a specific career field in the future.

2.2.2. Characteristics of English in economic majors

English for economic purposes has many specific elements with many concepts and terms specific to the economic field, so in order to teach English for economic purposes, English teachers must also have certain knowledge of those concepts and terms. They need to have a certain level of specialized knowledge to be able to undertake the task of teaching English for economic purposes. Lecturers of English for accounting, business administration, finance and banking, and e-commerce are often English teachers. Access to some specialized knowledge - for example, accounting, finance and banking - requires teachers to have a lot of time to research, explore, and learn more from specialized lecturers. This is also the reason why not all teachers are ready to teach English for economic purposes immediately when assigned.

2.2.3. Teaching and learning ESP in economics majors

The teaching of English for Specific Purposes (ESP) began in the 1960s when international students came to the UK to study a specific subject (Starfield, 2016). Over the years, the teaching of ESL has changed, with more branches of ESL appearing. Academic English focuses on students who want to learn English before entering a specific subject. English for Occupational Purposes (ESP) focuses on the language used for work purposes (Basturkmen, 2010).

Studies by Mc Closkey (1983) suggested that economic knowledge plays an important role in helping learners understand economic English texts more quickly. Economic language also uses rhetorical tools similar to other languages, so economic English often uses effective rhetorical tools to refer to the characteristics of new issues in the economic field.

2.2.4. Assessment of students' ESP learning outcomes

Since the beginning of the 21st century, when language testing and assessment began to develop,

more attention has been paid to students' English language acquisition. At the same time, educators and researchers have made great efforts to explore various factors that are believed to influence students' success in learning this language and finding ways to help them succeed in learning this language has attracted much attention in previous studies (Mushtaq & Khan, 2012).

When it comes to English for Specific Purposes, Lavinia (2017) assessed the needs of learning English for tourism students at Constanta University and found that most students learn English for their future careers, so they pay great attention to the learning outcomes of the English for tourism course. The author believed that the assessment of learning outcomes of the English for tourism course should be based on the development of English skills to meet the needs of the labor market.

2.3. Factors impacting on students' learning outcomes in ESP

2.3.1. Student factors

A. Psycho-cognitive factors

a. Autonomy

Duff, (2012) states that autonomy describes "the ability of people to make choices, exercise control, self-regulate, and thereby pursue their goals as individuals, potentially leading to personal or social transformation". In other words, the ability to manage one's own learning is called autonomy (Benson, 2011). Autonomy is expressed in choosing goals for oneself and engaging in behavioral and intellectual learning processes to achieve those goals. Learning that originates from learners' self-generated behaviors, systematically focusing on achieving their learning goals is considered autonomy (Rahimi & Abedini, 2009; Ismail et al., 2023). Individual learning styles, proactively seeking help from peers or instructors, are also manifestations of autonomy (Fathi et al., 2021; Ismail et al., 2023). To consolidate academic knowledge, learners can improve their study habits, learning abilities, and apply learning methods by taking charge of their own learning (Eslami & Fatahi, 2008).

The correlation between learner autonomy and English language performance is significantly positive (Hashemian and Soureshjani, 2011), learner autonomy and English proficiency have a strong, positive relationship (Myartawan et al., 2013). The components of self-directed learning, cognitive strategies and metacognition, are dominant predictors of students' reading comprehension and problem-solving abilities, respectively (Mohammadi and Ahangari, 2020).

b. Motivation and attitude

With a focus on clarifying the relationship between motivation, attitude and learning outcomes in English majors, Liu (2007) investigated the attitudes and motivation of Chinese university students in learning English and showed the correlation of both variables with students' English learning outcomes. Al-Mahrooqil (2012) found that lack of motivation in learning English can be considered a major factor leading to students' low English proficiency. Therefore, learners' motivation and attitude play an important role in improving learners' English proficiency, or second language learners must possess both motivation and attitude to achieve success in mastering a new language.

c. Learning strategy

Learners' learning strategies have long been discussed as an integral contributor to their language proficiency. As Cook (2016) stated, proficient and good second language users can acquire that language through different strategies. In other words, more proficient learners use a wider variety of language strategies and are more effective in implementing those strategies. Less proficient or less effective learners tend to exhibit limited knowledge of learning strategies.

B. Knowledge factors

a. Specialized vocabulary

Nation (2008) defines specialized vocabulary as words that are "recognizably specific to a particular topic, field or discipline". It is also estimated that technical vocabulary probably ranges in size from around 1,000 to 5,000 depending on the particular field (Nation, 2008). Chung and Nation (2004) indicate that specialized vocabulary is part of a system of a subject knowledge. Specialized words are normally used within a particular subject area, which means that people inside the industry would be expected to be knowledgeable enough to understand the technical vocabulary so that they can use them fluently (Coxhead, 2012).

b. Specialized knowledge

In its development, ESP in economic and business majors is to fill "the gap between the English taught in the classroom and the English used in the work-place" (Nelson, 2006). Some researchers link the

learning of English for economic majors with "business practices, especially intercultural negotiations" (Bargiela-Chiappini & Zhang, 2012).

2.3.2. Lecturer factors

a. Lecturer quality

For English lecturers, according to Brosh (1996), effective English lecturers are those who focus on understanding, mastering the language, preparing interesting lessons, helping students to be independent and treating students fairly. Milevica (2006) asserts that English lecturers for specific purposes must be both good English lecturers and experts in the field they are responsible for. Authors Do Thi Xuan Dung and Cai Ngoc Duy Anh (2010) argue that most specialized lecturers are people with good professional knowledge but have not been trained in foreign language teaching methods. Mahmoud and Thabet (2013) consider English language proficiency including correct pronunciation and initiative in engaging students in classroom activities as important characteristics for English lecturers. According to Madhavilantha (2014), lecturers of English for Specific Purposes need to be well prepared in teaching theories, understand learners' expectations and grasp the constant changes in technology. Therefore, proficiency in the English language is the key for lecturers to be able to effectively perform their role as language lecturers (Richard, 2013), in addition to pedagogical skills and attitudes.

b. Teaching method

According to Freeman (2016), in language teaching and learning, language is both the content taught and the medium used to teach that content. The importance of pedagogical knowledge and teaching ability has been reinforced by a number of researchers. Pedagogical knowledge and skills help English lecturers know the important aspects of language needed for different levels of language proficiency, how to organize the curriculum, and choose appropriate teaching strategies and techniques. Teaching skills are also one of the three areas that Borg (2006) considers as the basis for forming the characteristics of EFL lecturers.

c. Assessment and feedback

Green (2014) notes that "alternative assessment methods are often more engaging and can be more useful and provide a deeper understanding of the learning process"; however, a large proportion of lecturers still focus on summative assessment because they do not have the knowledge and skills to do so. Therefore, assessment methods may be one of the reasons why learners do not achieve the expected level of English proficiency.

Providing feedback is another contributing factor in developing students' English proficiency. Meaningful and positive feedback can help reduce anxiety, leading to more language communication and positive language learning outcomes.

2.3.3. External factors

A. Context

a. Learning environment

According to Zilvinskis (2015), the learning environment is an external factor that influences learning outcomes while the assessment system is an important component of teaching and learning. Educational professionals must carefully assess learners' learning as it has an impact on learners' attitudes and the learning methods used. The learning environment can be defined as the environment, both inside and outside the classroom, in which foreign or foreign language learning can take place. The learning environment is believed to influence students' language learning process and ultimately their learning outcomes in terms of language proficiency (Housen et al., 2011). The learning environment is very important for teachers and students as it affects how teachers impart knowledge and how learners receive knowledge.

b. Socio-economic background

There is a strong correlation between students' socio-economic background and their educational access and outcomes (Crawford, 2014). Students' socio-economic background includes their racial background, family income, family structure, and parents' educational attainment. Ross and Wu (1995) generalized that as their family's social status and income increase, students tend to perform better in their academic performance. A study by Olaitan (2012) found that the type of school students attend depends largely on their socio-economic background. Therefore, what and how they are educated in such schools depends on their socio-economic status. Family income, time spent on self-study and mother's education level have positive impacts, while mother's age has negative impacts on learning outcomes (Hijazil & Naqvi, 2006). Nguyen Quoc Nghi (2011) added two more important factors, which are personal feelings and family's level of interest in learning, which have a strong impact on students' learning outcomes. Phan Ngo

Minh Truc (2013) summarized that factors affecting students' learning outcomes include school age, gender, year of university, major that suits interests, absence time, and self-study time.

B. Technology

Technological factors can also influence students' learning methods and learning quality. As technology develops rapidly, students consider digital technologies as a necessity both in their daily life and in their school life (Mutansyir, 2002). Worldwide, technology is an indispensable part of teaching and learning. Moreover, thanks to recent rapid developments, students can now use multiple modes such as face-to-face learning, online learning, and blended learning to meet their learning needs (Lee, 2008).

Language learning has benefited significantly from the development of Artificial Intelligence due to the numerous tools and applications it now offers (Nagao, 2019). AI algorithms to provide tailored learning paths, adaptive feedback, and personalized training. Language learning chatbots use natural language processing to engage students in conversational practice and provide instant feedback (Ma, 2019). Pronunciation assessment and improvement are made possible by speech recognition technology. Virtual reality (VR) and augmented reality (AR) applications create immersive environments for language learning. Machine translation tools make it easier to understand and translate messages. These AI programs offer a great opportunity to improve the language learning process. AI-powered language learning systems can be customized based on the learner's requirements, interests, and skill level. Real-time feedback from AI tools allows language learners to correct their mistakes and improve their proficiency (Kühne & Edler, 2022).

3. Methodology

Quantitative research is used in data collection through questionnaire-based surveys. The answers and information in the survey (including some demographic information of the respondents such as: name, gender, date of birth, ethnicity, school) are completely confidential, serving only for research purposes.

The researcher used random sampling method to select the research sample. Then, by convenient sampling method, the author will select 445 representatives from several universities of economics and business, and from each university the researcher will randomly select students from several classes representing the university to participate in the survey.

The author used quantitative methods like EFA analysis, PLS-SEM model analysis to process data, and combine with qualitative methods to describe, explain, and analyze the results.

3.1. Analytical tools

a. Questionnaire

The questionnaire consists of 2 parts: part 1 is demographic questions, part 2 is questions about the factors that affect the English learning outcomes of students in universities of economics and business, which are factors related to lecturers, factors related to students and factors related to context. Except for the demographic questions, the remaining questions use a 5-level Likert scale from (1) to (5) of Rensis Likert (1932), equivalent to "completely disagree" to "completely agree".

b. Interview

Interviews were conducted from March 2022 to June 2022 at universities selected by the author, through the process of collecting opinions from education experts like head of Training and Management Department, head of Student Management Department, lecturers and students.

3.2. Assessing the reliability of the scale

According to Trochim (2020), it is necessary to eliminate variables with low Corrected Item – Total Correlation coefficients, with values < 0.3. After removing an observed variable, re-test Cronbach's Alpha to evaluate the reliability of the new scale. Do this until all questions in the scale have a total question-variable correlation coefficient ≥ 0.3 and ensure the Cronbach's Alpha coefficient value of the entire scale, then stop removing variables.

With Cronbach's Alpha = 0.833, this scale is reliable and has good internal consistency.

3.3. Exploratory Factor Analysis

Table 1. *KMO value and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.927
Bartlett's Test of Sphericity	Approx. Chi-Square	10199.379
	df	820
	Sig.	.000

The test results show that the KMO value is 0.927 > 0.5 and Bartlett's Sig. is 0.000 < 0.05, showing that

the observed variables are correlated with each other in the population. This is sufficient to conduct exploratory factor analysis.

Table 2. *Rotated matrix results of the elements in the independent variable*

	Elements				
	1	2	3	4	5
TC3	.775				
CLHT1	.768				
TD4	.748				
TD1	.725				
TC1	.719				
DL1	.708				
TC4	.693				
DL3	.692				
CLHT3	.678				
DL2	.655				
TD3	.562				
TVCN1		.766			
TAGT1		.727			
KTCN1		.716			
TVCN2		.711			
TVCN3		.700			
KTCN2		.697			
TAGT3		.693			
TAGT2		.692			
KTCN3		.608			
PPSP1			.760		
DGPH3			.747		
CLGV2			.747		
CLGV3			.724		
DGPH2			.702		
PPSP2			.692		
CLGV1			.612		
PPSP3			.553		
DGPH1			.550		
KTXH3				.785	
KTXH1				.781	
MTHT 5				.780	
KTXH2				.779	
MTHT 1				.774	
MTHT 4				.754	
CN1					.775
CN2					.719
CLHT4					.719
CLHT5					.705
CLGV4					.702
CN4					.688

The EFA results showed that no observed variables were eliminated. Thus, there are 5 groups of factors: Students' Psychology- Cognition, Students' Knowledge, Lecturer, Context and Technology. To study the factors affecting the ESP learning outcomes of students in economic universities, the author selected these factors to include in the research model. The proposed research model is as follows:

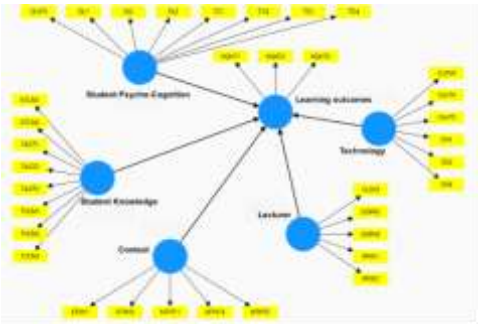

Figure 1. *The research model*

4. Results and findings

4.1. Assessment of the research model

a. Assessment of observed variables

Table 3. *Outer loadings*

	CONTEXT	TECHNO LOGY	LECTURER	STUDENT PSYCHO-COGNITION	STUDENT KNOWLEDGE	LEARNING OUTCOMES
CLGV1			0.663			
CLGV2			0.698			
CLGV3			0.820			
CLGV4		0.766				
CLHT1				0.809		
CLHT3				0.740		
CLHT4		0.773				
CLHT5		0.772				
CN1		0.787				
CN2		0.796				
CN4		0.759				
DGPH2			0.798			
DGPH3			0.771			
DL1				0.766		
DL2				0.741		
DL3				0.761		
KQHT1						0.886
KQHT2						0.871
KQHT3						0.844
KTCN1					0.784	
KTCN2					0.754	
KTXH1	0.795					
KTXH2	0.799					
KTXH3	0.804					
MTHT1	0.759					
MTHT2	0.614					
MTHT4	0.752					
MTHT5	0.787					
PPSP1			0.812			
PPSP2			0.725			
PPSP3			0.652			
TAGT1					0.770	
TAGT2					0.769	
TAGT3					0.769	
TC1				0.761		
TC3				0.817		
TC4				0.739		
TD1				0.760		
TD4				0.767		
TVCN1					0.779	

TVCN2					0.771	
TVCN3					0.765	

Outer loadings of observed variables, 4 variables were eliminated: CLGV1, CLGV2, MTHT2 and PPSP3 because their outer loadings were less than 0.8. The above results provide the outer loadings of each observed variable on the latent constructs in the PLS-SEM model. This is an important indicator to assess the convergent validity of each observed variable and the suitability of the latent constructs in the model. The remaining variables that meet the requirements should be retained and continued to be analyzed.

b. Assessment of the reliability and convergence of the scale

***Table 4**. Assessment of the reliability and convergence*

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CONTEXT	0.851	0.881	0.890	0.619
TECHNOLOGY	0.877	0.879	0.907	0.620
LECTURER	0.844	0.848	0.889	0.615
STUDENT KNOWLEDGE	0.902	0.903	0.921	0.593
KQHT	0.835	0.837	0.901	0.752
STUDENT PSYCHO-COGNITION	0.902	0.903	0.921	0.593

The results of the table above show that the Cronbach's alpha and CR indexes are all ≥ 0.7. This proves that the scale has achieved reliability.

Convergent validity is whether the observed variables of a latent variable are positively correlated with each other and how strong that positive correlation is. To assess the convergent validity, the researcher will consider the external loading coefficients of the observed variables, as well as the average variance extracted (AVE) value. This convergence assessment method is applied to the outcome measurement model (reflective), which is completely consistent with the research model of the thesis. The results from the table above also show that the convergence through the AVE index of all 5 factors is ≥ 0.5, so the scale structures ensure convergence (Cheah et al., 2018).

c. Assessment of the discrimination of the scale:

***Table 5**. Discrimination assessment results using HTMT table*

	CONTEXT	TECHNOLOGY	LECTURER	STUDENT KNOWLEDGE	LEARNING OUTCOMES
TECHNOLOGY	0.104				
LECTURER	0.168	0.413			
STUDENT KNOWLEDGE	0.058	0.562	0.347		
KQHT	0.103	0.699	0.513	0.688	
STUDENT PSYCHO-COGNITION	0.074	0.539	0.462	0.574	0.649

If the HTMT index is below 0.85, discrimination is well guaranteed. Thus, the range from 0.85 to 0.9 will be the acceptable level (Henseler et al., 2015). The pairs of constructs with good discrimination (HTMT <0.85) are the pairs:

- Context and other constructs: with Technology (0.104), Lecturer (0.168), Student Knowledge (0.058), Learning Outcomes (0.103), and Student Psycho-Cognition (0.074) all lower than 0.85. Therefore, the Context factor has good discrimination with all other constructs.

- Technology with:

Lecturer (0.413): Below the threshold of 0.85, has good discrimination.

Student Knowledge (0.562): Close to average, still meets the requirements.
Learning Outcomes (0.699): Close to the level of 0.7 but still ensures discrimination.
Student Psycho-Cognition (0.539): Below the level of 0.85. Thus, the Technology factor has good discrimination with all constructs.

- Lecturer with:
Student Knowledge (0.347): Very good, below the level of 0.85.
Learning Outcomes (0.513): Good discrimination.
Student Psycho-Cognition (0.462): Satisfactory. Thus, the Lecturer factor has good discrimination with other constructs.

The HTMT results show that the model has good discrimination with all latent constructs. The construct pairs such as Student Knowledge - Learning Outcomes and Technology - Learning Outcomes have relatively high correlations, but are still within the acceptable level. This suggests that the model is appropriate and can be used to explain the relationships in the study.

d. Assessment of the role of observed variables in the research model

Table 6. Results from bootstrapping

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
CLGV3 ← LECTURER	0.799	0.798	0.031	26.066	0.000
CLGV4 ← TECHNOLOGY	0.811	0.810	0.022	37.294	0.000
CLHT3 ← STU PSYCHO-COGNITION	0.767	0.767	0.028	27.716	0.000
CLHT4 ← TECHNOLOGY	0.760	0.759	0.034	22.126	0.000
CLHT5 ← TECHNOLOGY	0.787	0.787	0.027	29.352	0.000
CN1 ← TECHNOLOGY	0.797	0.796	0.025	31.643	0.000
CN2 ← TECHNOLOGY	0.808	0.808	0.022	37.088	0.000
CN4 ← TECHNOLOGY	0.761	0.760	0.026	29.344	0.000
DGPH2 ← LECTURER	0.769	0.768	0.031	24.704	0.000
DGPH3 ← LECTURER	0.773	0.772	0.032	23.848	0.000
DL1 ← STU PSYCHO-COGNITION	0.780	0.780	0.027	29.023	0.000
DL2 ← STU PSYCHO-COGNITION	0.759	0.759	0.030	25.155	0.000
DL3 ← STU PSYCHO-COGNITION	0.785	0.785	0.030	26.234	0.000
KQHT1 ← LEARNING OUTCOMES	0.887	0.887	0.014	63.942	0.000
KQHT2 ← LEARNING OUTCOMES	0.871	0.870	0.018	48.408	0.000
KQHT3 ← LEARNING OUTCOMES	0.843	0.844	0.022	38.923	0.000
KTCN1 ← STU KNOWLEDGE	0.784	0.783	0.027	29.252	0.000
KTCN2 ← STU KNOWLEDGE	0.754	0.753	0.033	22.813	0.000
KTXH1 ← CONTEXT	0.823	0.777	0.142	5.802	0.000
KTXH3 ← CONTEXT	0.813	0.770	0.151	5.386	0.000
MTHT1 ← CONTEXT	0.723	0.673	0.180	4.020	0.000
MTHT4 ← CONTEXT	0.802	0.755	0.143	5.601	0.000
MTHT5 ← CONTEXT	0.769	0.719	0.158	4.867	0.000
PPSP1 ← LECTURER	0.796	0.795	0.028	28.832	0.000
PPSP2 ← LECTURER	0.784	0.784	0.027	29.347	0.000
TAGT1 ← STU KNOWLEDGE	0.770	0.769	0.026	29.658	0.000
TAGT2 ← STU KNOWLEDGE	0.769	0.768	0.030	26.032	0.000
TAGT3 ← STU KNOWLEDGE	0.769	0.768	0.031	25.025	0.000
TC1 ← STU PSYCHO-COGNITION	0.772	0.772	0.024	31.988	0.000
TC4 ← STU PSYCHO-COGNITION	0.747	0.747	0.030	25.071	0.000
TD1 ← STU PSYCHO-COGNITION	0.771	0.770	0.033	23.382	0.000
TD4 ← STU PSYCHO-COGNITION	0.779	0.778	0.024	32.337	0.000
TVCN1 ← STU KNOWLEDGE	0.779	0.779	0.026	29.774	0.000
TVCN2 ← STU KNOWLEDGE	0.771	0.771	0.027	29.061	0.000
TVCN3 ← STU KNOWLEDGE	0.765	0.764	0.029	26.148	0.000

The table above shows that the initial regression coefficient (O) and the sample mean (M) are very close to each other, indicating the stability of the coefficients through bootstrapping. All coefficients

have |T|>2 values and many coefficients have very high values (such as KQHT1 = 63.942), confirming the strong significance of the explanatory variables for the model.

Lecturer: regression coefficients such as CLGV3 (O = 0.799), DGPH2 (O = 0.769), PPSP1 (O = 0.796) are all very high. This shows the important role of Lecturer in influencing different aspects of students' learning outcomes.

Technology: variables CLGV4 (O = 0.811), CN2 O = 0.808), CN1 (O = 0.797) all have very high coefficients, showing that Technology is a key factor in supporting learning and teaching.

Student Psycho-Cognition: variables such as CLHT3 (O = 0.767), DL1 (O = 0.780), TC1 (O = 0.772) all have high values, showing the necessity of the factor in the learning process of students.

Context: variables KTXH1 (O = 0.823), KTXH3 (O = 0.813) showing that the context plays a big role in influencing learning outcomes. The standard error (STDEV) of this group is larger, showing higher variability in this group.

Student Knowledge: variables KTCN1 (O = 0.784), TAGT1 (O = 0.770), TVCN1 (O = 0.779) show that students' basic knowledge has a great influence on learning outcomes.

Learning Outcomes: indicators KQHT1 (O = 0.887), KQHT2 (O = 0.871), KQHT3 (O = 0.843) have very high coefficients, proving that the model has a strong predictive ability for learning outcomes.

Regarding the stability of the model, the standard error (STDEV) of the coefficients in all variables is very small (mostly in the range of 0.02 - 0.03), proving that the coefficients are stable and reliable. The large t value shows that the variables have a strong statistical significance.

All variables are guaranteed because they have P value < 0.05. Therefore, all observed variables are highly statistically significant (P=0.000). Constructs such as Technology, Learning Outcomes, and Lecturer are well measured with high factor loadings.

e. Assessment of the direct impact between variables

Table 7. *Results of direct impact*

	Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics	P values	Conclusion
STU KNOWLEDGE → LEARNING OUTCOMES	*H1*	0.297	0.296	0.035	8.527	0.000	Accept
STU PSYCHO-COGNITION → LEARNING OUTCOMES	*H2*	0.213	0.213	0.038	5.605	0.000	Accept
LECTURER → LEARNING OUTCOMES	*H3*	0.126	0.126	0.034	3.662	0.000	Accept
CONTEXT → LEARNING OUTCOMES	*H4*	-0.119	-0.118	0.040	2.999	0.003	Accept
TECHONOLOGY → LEARNING OUTCOMES	*H5*	0.313	0.312	0.036	8.617	0.000	Accept

To examine the impact between independent variables on the dependent variable, which is the students' English proficiency test scores, it is necessary to rely on the absolute value of the standardized impact coefficient.

The strongest impact on the English proficiency test scores of students in the economic university is the Technology factor. The impact coefficient (O=0.313) shows that this factor has the strongest and most positive impact among the factors. The values: T=8.617, P=0.000 reflect that this impact is completely statistically significant.

The second strongest impact on the English proficiency test scores of students in the economic university is the Student Knowledge factor. The impact coefficient O=0.297 shows that this factor has a positive and strong impact (almost equal to that of Technology). The indices T=8.527, P=0.000 show that this impact is also completely statistically significant.

The third strongest factor affecting the English proficiency of students in the economic university is the Psychological - Cognitive factor of students. The impact coefficient O=0.213 shows that this is a positive factor and the impact level is average. The value T=5.605, P=0.000 reflects a statistically significant impact.

The fourth strongest factor affecting the English proficiency of students in the economic university is the Lecturer factor. The impact coefficient O=0.126 shows that the impact from this factor is positive but the impact is average. The value T=3.662, P=0.000 reflects that this impact is statistically significant.

The fifth strongest factor affecting the English proficiency of students in the economic university is the Context factor (Original weight O is -0.199). This factor has a negative impact, reflecting a negative but mild influence. The value T=2.999, P=0.003 reflects that this impact is statistically significant.

4.2. Testing the difference

a. Testing the gender difference that affect students' ESP learning outcomes

To do this. The author conducted an Independent Sample T-Test with two groups of subjects. Male and Female.

Table 8. *Average statistics on gender*

	Gender	N	Mean	Std. Deviation	Std. Error Mean
F_KQHT	Male	189	3.3104	.67289	.04895
	Female	256	3.1979	.59692	.03731

The table above shows that the mean F_KQHT score of the Male group is 3.3104. higher than that of the Female group (3.1979). however. this difference is quite small (0.1125). The standard deviation of the Male group (0.67289) is larger than that of the Female group (0.59692), indicating that the dispersion of data in the Male group is slightly larger than that of the Female group. The standard error (Std. Error Mean) of the Male group (0.04895) is larger than that of the Female group (0.03731). This is because the Male group has a smaller sample size than the Female group.

Table 9. *Testing the gender difference using Independent Samples Test*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
F_KQHT	Equal variances assumed	4.868	.028	1.861	443	.063	.11249	.06045	-.00631	.23128
	Equal variances not assumed			1.828	376.273	.068	.11249	.06154	-.00852	.23350

The Mean Difference is 0.11249. but the 95% confidence interval contains the value 0 ([-0.00852; 0.23350]), indicating that this difference may be due to chance alone. Therefore, the conclusion is that there is no significant difference between the means of the two groups based on the T-Test.

b. Testing regional difference in students' ESP learning outcomes

Table 10. *Regional average statistics*

F_KQHT	Rural. Urban	N	Mean	Std. Deviation	Std. Error Mean
	Rural	139	3.2806	.61288	.05198

	Urban	306	3.2298	.64090	.03664

The mean score of the Rural group (3.2806) is slightly higher than that of the Urban group (3.2298). However, this difference is not large. Both groups have relatively similar standard deviations (Std. Deviation): around 0.61-0.64. This shows that the dispersion of data in the two groups is relatively even. The standard error of the Rural group (0.05198) is slightly larger than that of the Urban group (0.03664). because the Urban group has a larger sample size (N).

Table 11. *Testing regional differences using Independent Samples Test*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
F_KQHT	Equal variances assumed	.156	.693	.784	443	.433	.05073	.06467	-.07638	.17784
	Equal variances not assumed			.798	278.101	.426	.05073	.06360	-.07447	.17592

The t-value indicates the difference between the means of the two groups relative to the standard error. A small t-value (t = 0.784) indicates that the difference between the means of the two groups is very small.

With p-value = 0.433 > 0.05, there is not enough evidence to reject the null hypothesis. Thus, there is no statistically significant difference in the means of the F_KQHT variable between the two groups of Rural and Urban.

The mean value of the Rural group is about 0.05073, higher than that of the Urban group, but this difference is not statistically significant.

The confidence interval [–0.07638; 0.17784] includes the value 0, indicating that the mean difference between the two groups can be negative, positive, or zero. This reinforces the conclusion that there is no significant difference.

5. Conclusion

In the paper, the researcher identifies and analyzes the factors that influence students' ESP learning outcomes in university of economics and business.

The study has pointed out and analyzed the factors affecting the learning outcomes of the specialized English course of economic students, including student factors, lecturer factors and contextual factors. The author also tested the scale, and with Cronbach's Alpha = 0.833, this scale is reliable and has a good level of internal consistency.

The EFA results show that no observed variables were eliminated and there are five independent factor groups. The Student factor group includes 2 factors, namely Student Psycho-Cognition and Student Knowledge. The External factor group is also divided into 2 factors, namely Context and Technology. Thus, there are five factor groups: Student Psycho-Cognition, Student Knowledge, Lecturer, Context and Technology.

The regression results show that the model is suitable, the independent variables are all statistically significant in explaining the dependent variable. The independent variables are not strongly correlated with each other, ensuring the accuracy of the model. Correlation analysis shows that knowledge and technology variables have the strongest influence on learning outcomes, while learning context does not have much influence on learning outcomes.

Comparing between educational institutions, Banking Academy and Finance Academy stand out with higher average learning outcomes than other schools, while the University of Economics - VNU, National Economics University, Foreign Trade University, and University of Commerce have fairly comparablr results.

The author has highlighted the statistical distinctions between student groups at various economic universities through this investigation.

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- **Ethical approval:** The conducted research is not related to either human or animal use.
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References

[1] Al-Mahrooqil, R., (2012). A student perspective on low English proficiency in Oman. *International Education Studies*, 5 (6): 236-271. http://www.ccsenet.org/journal/index.php/ies/arti- cle/view/19832.

[2] Allen, K. N., & Friedman, B. D. (2010). Affective learning: a taxonomy for teaching social work values. *Journal of Social Work Values and Ethics*, 7(2), 1-12.

[3] Anderson, H. M., Moore, D. L., Anaya, G., & Bird, E. (2005). Student learning outcomes assessment: a component of program assessment. *American Journal of Pharmaceutical Education*, 69(2), 256-268.

[4] Andrich, D. (2002). ìA Framework Relating Outcomes Based Education and the Taxonomy of Educational Objectivesî, *Studies in Educational Evaluation*, Vol. 28, 35-59

[5] Basturkmen, H., & Wette, R. (2016). English for academic purposes. In *The Routledge handbook of English language teaching* (164-176). Routledge.

[6] Benson, P. (2011). Teaching and researching autonomy in language learning (2nd ed,). Harlow: *Longman*.

[7] Borg, S., (2006) The distinctive characteristics of foreign language teachers. *Language Teaching Research*. 10(1): 3-31.

[8] Brosh, H., (1996) Perceived characteristics of the effec- tive language teacher. *Foreign Language Annals*. 29 (2): 125-138.

[9] Carsten et al. (2013). Collinearity: A review of methods to deal with it and a simulation study evaluating their performance. *Ecography*. 36. 27-46.

[10] Chung, T. and Nation, P. (2004). Identifying technical vocabulary. *System* 32: 251–63.

[11] Cook, G. (2003). Applied linguistics. *New York: Oxford University Press*

[12] Cook, V., (2016). Second language learning and language teaching, Fifth Edition. New York and London: *Routledge,* 334 pages

[13] Coxhead, A. (2012). *The Handbook of English for Specific Purposes* (115-132). *John Wiley & Sons, Inc*. https://doi.org/10.1002/9781118339855.ch6

[14] Crawford, C., (2014). Socio-economic differences in uni- versity outcomes in the UK: Drop-out, degree com- pletion and degree class (Economic and Social Re- search Council edition). Warwick: *University of Warwick and Institute for Fiscal Studies.*

[15] Crystal, D. (2003). English as a global language (2nd ed.). *Cambridge: Cambridge University Press.* https://doi.org/10.1017/CBO9780511486999

[16] Đỗ Thị Xuân Dung, Cái Ngọc Duy Anh (2010). Dạy và học tiếng Anh chuyên ngành trong tình hình mới: Thách thức và giải pháp. *Tạp chí Khoa học ĐH Huế*, 60, 31-41.

[17] Dudley Evans (1990) The language of economics: the analysis of economics discourse. *London: Modern English publications*

[18] Duff, P. (2012). Identity, agency and SLA. In A. Mackey, & S. Gass (Eds.), Handbook of second language acquisition, (410–426). London: *Routledge.*

[19] Francesca Bargiela-Chiappini, Zuocheng Zhang (2012). *The Handbook of English for Specific Purposes*, 193-211

[20] Freeman, D., (2016). Educating second sanguage teachers: The same things done differently. *Oxford University Press*. Oxford, 312 pages.

[21] Green, A., (2014) Exploring Language Assessment and Testing – Language in Action. *Routledge.* New York, NY, 272.

[22] Hashemian, M. and Soureshjani, K. H., (2011). The inter- relationship of autonomy, motivation, and academic performance of Persian L2 learners in distance edu- cation contexts. *Theory and Practice in Language Studies*, 1(4): 319-326.

[23] Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the*

Academy of Marketing Science, 43(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

[24] Hijazi, S. T., & Naqvi, S. M. M. (2006). Factors affecting students' performance. *Bangladesh e-journal of Sociology*, *3*(1).

[25] Hou, A. Y.-c. (2010). The development of a student learning outcomes based accreditation model in Taiwan higher education. *Asian Journal of University Education*, 6(1), 29-48.

[26] Housen, A., Schoonjans, E., Janssens, S., Welcomme, A., Schoonheere, E., and Pierrard, M., (2011). Conceptual- izing and measuring the impact of contextual factors in instructed SLA – the role of language prominence. *The Modern Language Journal*, 49: 83-112.

[27] Ismail, S. M., Nikpoo, I., & Prasad, K. D. V. (2023). Promoting self-regulated learning, autonomy, and self-efficacy of EFL learners through authentic evaluation in EFL classrooms. *Lang Test Asia*, 13, 27. https://doi.org/10.1186/s40468-023-00239-z

[28] Jayanthi, Balakrishnan, Ching, Latiff, Nasirudeen (2014) Factors Contributing to Academic Performance of Students in a Tertiary Institution in Singapore, *American Journal of Educational Research*, 2(9), 752–758.

[29] Kelly, S., Violanti, M., Denton, E., & Berry, I. (2022). Instructor misbehaviors as predictors of students' writing apprehension. *Communication Quarterly*, 70(4), 29-447. https://doi.org/10.1080/01463373.2022.2077123

[30] Kühne, O., & Edler, D. (2022). Georg Simmel Goes Virtual: From Philosophy of Landscape to the Possibilities of Virtual Reality in Landscape Research. *Societies*, 12(5), 122. https://doi.org/10.3390/soc12050122

[31] Lavinia, N. (2017). ESP teaching and needs analysis. Case study. *Economic Sciences Series*, 17(2), 268-273.

[32] Lee, K. S. (2008). WebQuests in the English classroom: How do they affect student learning? (*Dissertations, University of North Carolina, Chapel Hill*).

[33] Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*

[34] Liu, M., (2007) Chinese students' motivation to learn English at the tertiary level. *Asian EFL Journal*. 9 (1): 126-146. https://www.asian-efl-journal.com/1042/quarterly-journal/chinese-students-motivation-to-learn-english-at-the-tertiary-level/

[35] Ma, Z. (2019). Application and Practice of Artificial Intelligence in Maker Education and Teaching. *Advances in Higher Education*, 3(2), 105. https://doi.org/10.18686/ahe.v3i2.1423

[36] Madhavilantha, B. (2014) Teacher Education and ESP. *International Journal of Research, Humanities, Arts, and Literature* 2(4): 73-82.

[37] Mahajan, M., & Singh, M. K. S. (2017). Importance and Benefits of Learning Outcomes. IOSR *Journal of Humanities and Social Science*. 22(3), 65-67. ISSN: 2279-0845.

[38] Mahmoud, A. M., and Thabet, A., (2013). The qualities of the good English teacher as perceived by Saudi and Yemeni college students of English. *Greener Journal of Educational Research*, 3(2): 72-79.

[39] Mc Closkey (1983) The rhetoric of economic, *Journal of economic literature*, 31: 434-61

[40] Milevica, B. (2006). Teaching foreign language for specific purposes: Teacher development. *Proceedings of 31st Annual ATEE Conference At: Portoroz, Slovenia*, 487-493. doi:10.13140/2.1.4011.4566

[41] Mohammadi, R. R., Saeidi, M., & Ahangari, S. (2020). Self-regulated learning instruction and the relationships among self-regulation, reading comprehension and reading problem solving: PLS-SEM approach. *Cogent Education*, *7*(1), 1746105.

[42] Mushtaq, I. & Khan, S. N. (2012). Factors Affecting Students' Academic Performance. *Global Journal of Management and Business Research*, 12(9), 16-22.

[43] Mutansyir, R. (2002). Sejarah perkembangan ilmu (Development of science). Yogyakarta: *Liberty Yogyakarta*.

[44] Myartawan, I., and Latief, M. S., (2013) The correlation between learner autonomy and English proficiency of Indonesian EFL college learners. *TEFLIN Journal*, 24 (1): 63-81. https://www.researchgate.net/publication/259762858.

[45] N. T. T. An, N. T. N. Thu, D. T. K. Oanh, and N. V. Thanh (2016). Influential Factors on the Academic Performance of First and Second-year Students at Can Tho University of Sciences and Technology, (in Vietnamese), *Journal of Science, Can Tho University*, no. 46, 82– 89, 2016.

[46] Nagao, K. (2019). Artificial Intelligence in Education. Artificial Intelligence Accelerates Human Learning, 1-17. https://doi.org/10.1007/978-981-13-6175-3_1

[47] Nation, P. (2008). *Teaching vocabulary: Strategies and techniques*. Boston, Heinle.

[48] Nelson, M. (2006) Semantic associations in Business English: A corpus-based analysis. *English for Specific Purposes* 25: 217–34.

[49] Nguyen Quoc Nghi (2011). Identifying factors leading to poor academic performance of

students at Can Tho University, Can Tho University Course Journal, 03(21), 96-104

[50] Olaitan, A. J. (2012) effects of socio-economic status and attitudes on the academic achievement of secondary school students in reading comprehension in english language.

[51] Phan Ngo Minh Truc (2013). Solutions to improve academic performance of full-time students at Ho Chi Minh City Open University.

[52] Rahimi, A., & Atiyeh Abedini. (2009). The interface between EFL learners' self-efficacy concerning listening to comprehension and listening proficiency. *Novitas – ROYAL*, 3(1), 14-28.

[53] Richards, H., Conway, C., Roskvist, A., and Harvey, S., (2013) Foreign language teachers' language profi- ciency and their language teaching practice. *The Language Learning Journal*, 41(2): 231–246.

[54] Robertson, S. (2009) Europe, Competitiveness and Higher Education: An Evolving Project. In Globalisation and Europeanisation in Education, edited by R. Dale, and S. Robertson, 65–84. *Oxford: Symposium*.

[55] Scott, I. (2011). The learning outcome in higher education: time to think again? *Worcester Journal of Learning and Teaching*, (5), 1-8.

[56] Starfield, S. (2016). English for specific purposes. In *The Routledge handbook of English language teaching* (150-163). Routledge

[57] Suskie, L. (2004). Assessing student learning: A common sense guide. Bolton, MA: *Anker Publishing*.

[58] Trochim W. M. K. (2020), *Research Methods Knowledge Base*.

[59] Zilvinskis, J. (2015). Using authentic assessment to reinforce student learning in high-impact practices. *Assessment Update*, *27*(6).