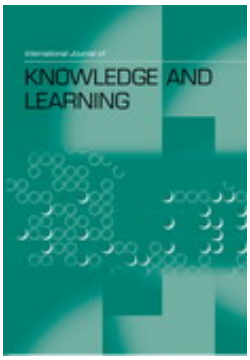

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The evaluation of students' satisfaction with instructor performance having major key factors: the case of a Vietnamese university

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The evaluation of students' satisfaction with instructor performance having major key factors: the case of a Vietnamese university

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Abstract: The study aims to identify key factors contributing to students' satisfaction with instructor performance in English courses in order to assist higher educational institutions to maintain high levels of students' retention, to reduce dropout percentage, and to benchmark in terms of educational supply chain management. The sample is 438 responses provided by 226 undergraduates of nineteen English courses. Correlation and regression analysis were utilised in order to study the relationships among the factors. The results indicate that all five factors with 24 items influence positively and significantly and designed based on the experience of the researchers rather than on the experts' evaluation and students' opinions. This study contributes four factors with 20 items for determining students' satisfaction with instructor performance in English courses. These factors can assist HEIs to maintain high levels of students' retention, reducing dropout percentage, and benchmark with peer courses and departments in terms of educational SCM.

Keywords: students' satisfaction; factors contributing to students' satisfaction evaluation; instructor performance; educational supply chain management; English courses.

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1 Introduction

In recent years, English has been increasingly learned at all school levels and at foreign languages centres in the entire Vietnam (Nguyen, 2003, 2017). Hoang (2010) reported that approximately 94% of undergraduates and 92% of graduate students study English as a compulsory subject in their degree. According to the National Project, at least 5% of Vietnamese officers are required to achieve at least a B1 Level Certificate of Foreign Language Proficiency by 2015 and 30% of them gain this Certificate by 2020. The B1 Level Certificate of Foreign Language Proficiency is also one of the compulsory graduation criteria for university students (Ministry of Education and Training, Vietnam, 2009). Thus, university students of non-English majors are required to study English for approximately 200 hours over four years (Ton and Pham, 2010). Similarly, the hours of English study per week in primary schools and high schools have effectively increased from three (Ministry of Education and Training, Vietnam, 2006) to four since February 2019 (Ministry of Education and Training, Vietnam, 2018). Moreover, apart from English, students can choose one of the five foreign languages on offer, such as Japanese, Chinese, French, Korean, and German.

In order to satisfy a wide range of learning needs in the educational supply chain, various English courses and training programs have been increasingly offered by thousands of schools, public and private universities, and foreign languages centres nationwide. Similarly, Dong Thap University (DThU), one of the public universities, which is located in remote and rural areas in the Mekong Delta region, also offers a range of English courses annually. Table 1 reports that there has been a considerable number of students who enrol in English undergraduate degree in the period 2016–2020. For instance, in 2018, the highest percentage is 103.85% (n = 135/130); whereas in 2016, the lowest percentage is 45.83% (n = 55/120). The high percentage remains continuously at 97.08% (n = 133/137) in 2019, at 100% (n = 160/160) in 2020, and at 92.22%

(n = 166/180) in 2017. The incoming students of English major remain unchanged owing to the COVID-19 pandemic.

The increasing number of English enrolment in DThU results due to students' high level of motivation and communicative teaching methods. These methods utilised in the English classrooms include "calling for learner involvement, allowing learners' choice, changing teachers' and students' roles, and breaking down hierarchic barriers in the classrooms" (Larsen-Freeman, 2000). Such teaching methods can help students develop their communicative competence as well as use English appropriately in their study, daily communication, and workplaces. Furthermore, the formal classroom with transmission teaching lectures together with the distinctive relationship between teachers-as-superiors and students-as-inferiors have been replaced by student-centered activities and cooperative learning environments.

Table 1 Statistic of expected target and official enrolled undergraduates in English major in the period 2016–2020

Year	*Number of expected target undergraduates*	*Number of officially enrolled undergraduates*	*Percentage*
2016	120	55	45.83
2017	180	166	92.22
2018	130	135	103.85
2019	137	133	97.08
2020	160	160	100.00

Source: Department of Educational Quality Assurance, Dong Thap University, Vietnam, May 2021

However, annually, the dropout rate is rather high. Table 2 displays that over the period 2016–2020, although the number of undergraduate enrolments in 2018 is at the highest position (n = 135/130, 103.85%) as mentioned above, the number of undergraduate dropouts in this year remains in the first place (n = 14/135, 10.37%). The second and the third positions for the dropout rate are occupied by the year 2016 (n = 4/55, 7.27%) and by the year 2017 (n = 10/166, 6.02%), respectively. The lowest dropout rate falls to 0.75% (n = 01/133) in 2019 and is followed by 3.75% (n = 06/160) in 2020.

Table 2 Statistics of undergraduate English majored enrolments and dropouts in the period 2016–2020

Year	*Total number of enrolment*	*Number of dropouts*	*Percentage*
2016	55	4	7.27
2017	166	10	6.02
2018	135	14	10.37
2019	133	01	0.75
2020	160	06	3.75

Source: Department of Educational Quality Assurance, Dong Thap University, Vietnam, May 2021

The high dropout percentage may result from students' dissatisfaction with teaching activities and performance even though students have a high level of motivation (Paliwal et al., 2022). This prediction originates from the idea of end-user satisfaction in the

educational supply chain management (Habib and Jungthirapanich, 2009). Student satisfaction is considered one of the key variables in determining the success or failure not only of courses, programs, departments, and universities but also of student learning outcomes and performance. Moreover, numerous previous researchers have been interested in investigating challenges associated with students' satisfaction (Astin, 1993; Borden, 1995; Pascarella and Terenzini, 2005; Jamelske, 2009; Elliott, 2002; Tessema et al., 2012) and many of these researchers agreed that highly satisfied students are more likely successfully graduate from universities. In addition, satisfied students are more committed and at a higher retention rate than unsatisfied students, who are less willing to frequently attend classes, and even more likely to leave their schools (Jamelske, 2009; Borden, 1995).

Apart from the existing literature, in practice, official studies which serve as an evaluation of undergraduate students' satisfaction with instructor performance in English courses have been absent in DThU so far. Furthermore, benchmarking with peer departments and courses on key factors relating to instructor performance in terms of quality assurance approaches has been missing within the DThU campus. Therefore, with benchmark tools, higher educational institutions (HEIs) in general and DThU, in particular, can obtain systematic evidence about their effective educational practice, establish targets for excellence (McClenney, 2006), and refine academic service to improve students' success since benchmarking is about self-evaluation, good practice, and improvement (Camp, 1998). Additionally, "benchmarking is a learning process, which requires trust, understanding, selecting and adapting good practices in order to improve" [Horton, (2011), p.7].

For these reasons, in order to investigate what instructors in English courses are doing in maintaining a high level of undergraduate students' satisfaction, how successful they are, and what factors can be used as benchmark tools, this paper examines the below research statements:

1 The relationship between instructor performance in English courses and students' satisfaction.

2 The factors that can be used for determining undergraduate students' satisfaction with instructor performance in English courses.

3 The factors that have a positive interrelationship with undergraduate students' satisfaction with instructor performance in English courses.

This study aims to assess the relationship between instructor performance in English courses and students' satisfaction, to determine the factors, which can be used for determining undergraduate students' satisfaction with instructor performance, and to highlight factors that have a positive and significant relationship with students' satisfaction in English courses through an electronic course satisfaction survey (CSS) and factor analysis. These factors are expected to help HEIs maintain high levels of students' satisfaction with instructor performance in English courses and reduce dropout percentages. They are also predicted to be benchmark tools within the context of HEIs in terms of educational supply chain management.

The research gaps are highlighted from the Vietnamese context of teaching English and the literature review is as follows:

1 English is one of the compulsory subjects in the Vietnamese educational system nationwide (Prime Minister, Vietnam, 2008; Ministry of Education and Training, Vietnam, 2018). However, the research study factors contributing to students' satisfaction with English courses in Vietnam is very limited.

2 Instructor performance is strongly associated with students' satisfaction since students' satisfaction with instructor performance is considered a useful index of the institutional level, of employees' job satisfaction (Powell, 1977; Neumann and Neumann, 1981; Keaveny and McGann, 1978), and students' achievement (Giannousi et al., 2009; Dinh et al., 2021). However, the research gap is that most research was carried out with traditional students, who had different behaviours and tastes, in the traditional and low-tech learning environment in such a long time with a long history. Therefore, a study with modern students is needed to determine the similarities and diversities in terms of satisfaction with instructor performance among the two generations.

The current paper has been structured in six sections. Section 1 provides an introduction while Section 2 provides a literature review of educational supply chain management, students' satisfaction, and factors contributing to students' satisfaction. The study's methodology, conceptual framework, and samples are presented in Section 3 and the results of the study are analysed in Section 4. Section 5 outlines the discussion and major findings of this study. Finally, the conclusion and possible future research directions are discussed in Section 6.

2 Literature review

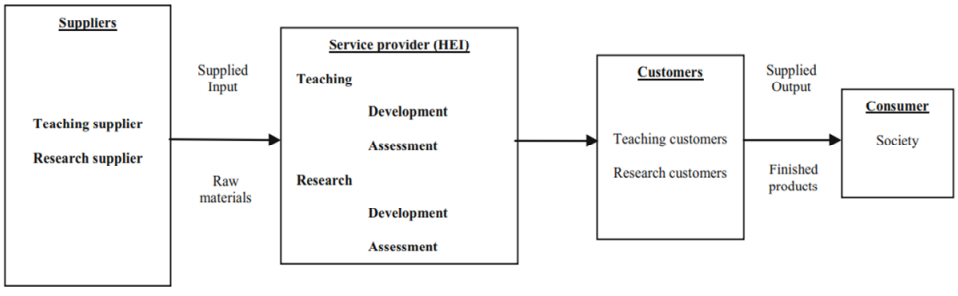
2.1 Supply chain management in the education sector

Within the educational context, end-user satisfaction has become extremely vital for HEIs in the educational supply chain management in terms of teaching services provided by HEIs. Education sector can be considered a service-based industry in which the objective is to produce quality graduates and research outcomes for its nations (Jauhar et al., 2018). In normal supply chains, the major objective is to satisfy customers by implementing the activities within and across the organisations effectively and efficiently. Similarly, in educational supply chains, nations play the roles of suppliers while educational institutions play the roles of the service industry (Jauhar et al., 2018). Habib and Jungthirapanich (2009) explain the process of supply chain management in the education sector in detail (Figure 1). Since many HEIs focus on research outputs apart from teaching, educational supply chain management includes two parts: teaching supply chain and research supply chain. In the teaching supply chain, students, who are considered raw materials, are processed through a diversity of academic and non-academic activities, assessment, skills development, and career preparation provided by HEIs' service in order to satisfy teaching customers and consumers (society). In the research supply chain, research topics as raw materials are processed through researchers, research activities, and research operators provided by HEIs service. The finished products of the teaching supply chain can be skilful and educated workers, teachers, engineers, doctors, and professionals; whereas, the finished products of the research supply chain can be research achievement.

2.2 Students' satisfaction

Astin (1993) defined students' satisfaction as the student's perception relating to the university experience and their received education value during their learning process in universities. Students' satisfaction is treated as an essential 'immediate outcome' that influences their motivation level (Chute et al., 1998; Nguyen, 2016; Paliwal et al., 2022). Satisfaction is also an effective prediction method of retention (Astin, 1993) and an evaluation method for measuring how well a learning environment supports academic success (Kumar et al., 2022; Lo, 2010). In addition, students' satisfaction has been considered the level at which students are satisfied with a variety of academic issues, e.g. advising, instruction quality, availability of courses, and class sizes [Tessema et al., (2012), p.35].

Figure 1 Supply chain management in the education sector



Source: Habib and Jungthirapanich (2009)

Students' satisfaction is often described as an attitude that lasts for a short term, highly depending on how the students assess their experiences with the supplied educational service (Elliott and Healy, 2001). Satisfaction in the education sector is also considered both an independent and dependent variable (Tessema et al., 2012). As an independent variable, satisfaction is clarified by college outcomes, such as GPA, retention rates, and graduation rates (Borden, 1995; Pascarella and Terenzini, 2005; Jamelske, 2009). As a *dependent variable*, satisfaction is defined by several academic factors, such as advising, instruction quality, and class sizes (Elliott, 2002).

Figure 2 The cycle performance-qualify-satisfaction

Source: Sigala et al. (2006)

Students' satisfaction measures are considered an indispensable tool in order to explore and understand students' tastes, needs, and expectations and the basis of qualified characteristics of the provided service. According to Sigala et al. (2006), customer satisfaction research contributes to defining and drawing up a more precise profile of the typical customer and the specific service. Also, the cycle performance assessment, service quality, customer satisfaction, and competitive advantage were proposed as in Figure 2.

In short, students' satisfaction levels are considerably and majorly concerned by the university administration, academic planners and educational teams (Daniel et al., 2017) since measuring students' satisfaction can give educators valuable information which can be utilised to enhance the courses, programs (Chute et al., 1998), and universities.

2.2.1 Factors contributing to students' satisfaction

Since students' satisfaction affects both individual and organisational performance (DeCenzo and Robbins, 2010; Nguyen, 2016), doing empirical analysis to identify factors affecting undergraduate students' satisfaction has attracted a variety of researchers. Some existing literature on factors impacting student satisfaction in HEIs was summarised and synchronised in the following table (Table 3).

Table 3 shows that the number of identified factors and the focused sectors are diverse among seven studies. Both Bolliger and Martindale (2004) and Ali et al (2011) focused on distance learning courses and then the former identified six factors, while the latter identified three factors positively impacting students' satisfaction with online courses (Maheshwari, 2021; Dinh et al., 2021). Aldridge and Rowley (1998) suggested eight factors in a medium-size HEIs, Edge Hill University College, UK; Tessema et al. (2012) proposed eleven factors with the major curriculum at a medium-sized Midwestern US university; whereas Butt and Ur Rehman (2010) contributed three factors in the sectors of private and public universities in Pakistan. Corts et al. (2000) indicated five factors affecting students' satisfaction in an academic department, while Elliott (2002) identified eleven factors affecting students' satisfaction with the educational experience.

Table 3 Summary of discussed factors to assess students' satisfaction in HEIs in accordance with the chronological publishing timeline

Authors	*Year*	*Research organisation/focus*	*Contribution*
Aldridge and Rowley	1998	Edge Hill University College, UK (a medium-sized HEIs)	Personal and course details, teaching, and learning
			Teaching and learning
			Teaching and learning support
			Services and facilities for students
			Equal opportunities
			Equal opportunities, disability, and environment
			Communication, consultation, feedback, and complaints
			Evaluation

Table 3 Summary of discussed factors to assess students' satisfaction in HEIs in accordance with the chronological publishing timeline (continued)

Authors	*Year*	*Research organisation/focus*	*Contribution*
Corts et al.	2000	An academic department	Advising
			Course offerings
			Career preparation
			Instruction
			Class sizes
Elliott	2002	Educational experience	Student centeredness
			Instructional effectiveness
Bolliger and Martindale	2004	Online courses in Southeastern USA	Instructor
			Technology
			Course management
			Course web site
			Interactivity
			General issues
Butt and Ur Rehman	2010	Private and public universities in Pakistan	Teachers' expertise
			Course offered
			Learning environment
			Classroom facilities
Ali et al.	2011	Distance learning courses in Allama Iqbal Open University of Pakistan	Instructors' performance
			Course evaluation
			Student-instructor interaction
Tessema et al.	2012	Students' satisfaction as a dependent variable with a major curriculum at a mid-sized Midwestern US university	Required course availability for major
			Quality of instruction
			Major course content
			Variety of courses
			Capstone experiences
			Academic advising
			Overall college experience
Tessema et al.	2012	Students' satisfaction as a dependent variable with a major curriculum at a mid-sized Midwestern US university	Preparation for career or graduate school
			Class size of major courses
			Grading in major courses
			Course availability for electives in major

The essential contribution from the papers in Table 3 is that even though they focused on students' satisfaction with either the entire HEIs or the individual courses and programs HEIs offer, six (85.7%) (Corts et al., 2000; Elliott, 2002; Bolliger and Martindale, 2004; Butt and Ur Rehman, 2010; Ali et al., 2011; Tessema et al., 2012) out of seven papers determined that the *quality of instruction* is significant in students' satisfaction explanation. Another important factor illustrated by Corts et al. (2000) and Tessema et al. (2012) is *career preparation* which forms a strong relationship with students'

satisfaction. For electronic courses, the factor technology affects positively and significantly students' satisfaction (Bolliger and Martindale, 2004). Especially, students' satisfaction is influenced significantly by the factor of *equal opportunities*, *disability*, and *environment*. Furthermore, the idea of applying the SERVQUAL model for assessing students' satisfaction with service quality offered by Dire-Dawa University, Ethiopia attracted Daniel et al. (2017).

2.3 Factors contributing to students' satisfaction with instructor performance

Students' satisfaction with instructors impacts significantly on students' overall satisfaction with their universities since it may "reflect attitudes towards the college and affect the general attractiveness of the college for new students with potential ramifications for present and future enrollment" [Neumann and Neumann, (1981), p.322]. Students' satisfaction with instructors is also likely to determine whether students recommend the courses taught by these instructors to other students within universities. Thus, instructors play a vital role in the explicit reputation of the universities. Therefore, various studies shed light on performance and behaviours an instructor displays which affect students' satisfaction. These instructors' performance and behavior factors that influence either positively or negatively students' satisfaction include:

1 presentational styles (Ware and Williams, 1975; Powell, 1977)

2 tests and grades policy (Keaveny and McGann, 1978; Powell, 1977; Neumann and Neumann, 1981)

3 course evaluation (Powell, 1977)

4 knowledge and competence (Keaveny and McGann, 1978; Neumann and Neumann, 1981; Butt and Ur Rehman, 2010)

5 course content and structure (Ware and Williams, 1975; Powell, 1977; Keaveny and McGann, 1978; Butt and Ur Rehman, 2010)

6 organisation of the course (Keaveny and McGann, 1978; Neumann and Neumann, 1981)

7 teaching methods ((Keaveny and McGann, 1978; Neumann and Neumann, 1981)

8 attitudes towards students (Keaveny and McGann, 1978)

9 fairness and assistance (Keaveny and McGann, 1978; Neumann and Neumann, 1981).

2.4 Factors contributing to students' satisfaction with instructor performance in English courses

Additionally, several previous studies have explored students' satisfaction with English as a foreign language (EFL) courses in the university context. Students, the indispensable participants, in the English language courses, and their attitudes towards these courses should be seriously evaluated since they not only impact students' motivation, but also affect teaching quality and shape the design and delivery of EFL courses (Nie and Hu, 2018). The vital factor which mostly affects students' satisfaction is instructor

performance and teaching methods in face-to-face classrooms, instructors' dominance over students and poor teacher-student interactions cause boring, passive, isolated, and unfriendly learning environments (Alsowat, 2016). Nguyen (2017) also emphasised that many students in EFL classrooms in Vietnam strongly are influenced by teachers' EFL methodology. Therefore, students' engagement which is defined as "the extent to which students are actively involved in a variety of educational activities that are likely to lead to high-quality learning" [Coates, (2005), p.26] involves the high quality of effort in the learning process (Kuh, 2001). Additionally, communicative language teaching techniques including "calling for learner involvement, allowing learners' choice, changing teachers' and students' roles, and breaking down hierarchic barriers in the classrooms" (Larsen-Freeman, 2000) contribute to students' satisfaction and English improvement.

With the help of the above literature reviews, the following hypotheses are proposed:

H1 There is a positive and significant relationship between course information delivery and student satisfaction.

H2 There is a positive and significant relationship between instructor's performance and student satisfaction.

H3 There is a positive and significant relationship between course content & instructor's teaching method and student satisfaction.

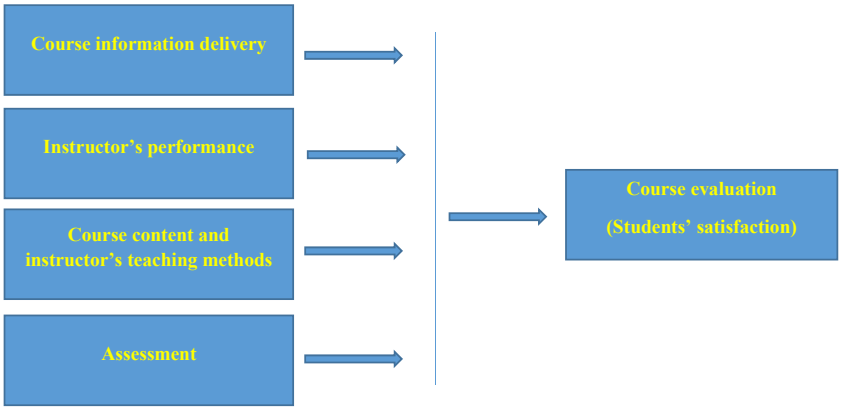
H4 There is a positive and significant relationship between assessment and student satisfaction.

3 Methodology

3.1 Research framework

Based on the English educational context in Vietnam and literature review above, this paper utilised the idea that students' satisfaction was evaluated as a *dependent variable* in Tessema et al. (2012). The conceptual model of students' satisfaction with instructor's performance in English courses offered by DThU in Vietnam is built in Figure 3.

Figure 3 Conceptual model of students' satisfaction with instructor performance (see online version for colours)



The presented model proposes that course information delivery, instructor's performance, course content, and instructor's teaching methods, and assessment factors as *independent variables* positively and significantly affect the *dependent variable*, students' satisfaction. The combination of previous literature on factors contributing to students' satisfaction with instructor performance and with English courses are fundamental principles of the 24-item design in the research instrument.

3.2 Sample

The satisfaction with instructor performance data set had 265 English-major students who enrolled in 19 English courses of Foreign Languages Faculty (FLF) at Dong Thap University (DThU), Vietnam during the first semester of the academic year 2020–2021. However, overall, only 226 usable respondents were obtained, resulting in a return rate of 85.3%. Similarly, out of 500 responses received, 438 responses were selected for the research sample data since they fulfilled all items, yielding a rate of 87.6%. The remaining 62 responses (12.4%) which had a high percentage of missing answered items in the CSS were excluded from the study.

Table 4 reports a selective sample including respondents' rates and responses rates. The data was collected from four levels of the university timeline. 31% (n = 70) of the respondents were first-year students, 21% (n = 48) were second-year students, 30% (n = 68) were third-year students, and 18% were fourth-year students (n = 18). Table 2 also shows that the student response rate was the highest among first-year students (47.7%, n = 209), and the lowest was among the fourth-year students (10.3%, n = 45). The response rate from second-year students and third-year students were 17.8% (n = 78) and 24.2% (n = 106), respectively.

Table 4 The total selected samples

Year	*Number of students*	*Percentage*	*Number of responses*	*Percentage*
1	70	31	209	47.7
2	48	21	78	17.8
3	68	30	106	24.2
4	40	18	45	10.3
Total	*226*	*100*	*438*	*100*

3.3 Data collection

The survey method was used to collect data from English-majored university students to examine their satisfaction related to instructor performance in English courses. The survey was conducted at the end of the first semester of the academic year 2020–2021 at Dong Thap University (DThU) in Vietnam. For data collection, DThU implemented an online survey, namely the CSS through its Department of Educational Quality Assurance. The CSS was sent to 265 students of Foreign Language Faculty (FLF) via the course register website of DThU, namely portal.dthu.edu.vn. Each student used their password to prevent unauthorised participants. The estimated time for participants to complete the CSS was ten minutes.

The CSS comprised twenty-four items affecting overall satisfaction with instructor performance which addressed five variables:

1 course information delivery

2 instructor's performance

3 course content and instructor's teaching methods

4 assessment

5 course evaluation (students' satisfaction) as shown in Table 5.

3.4 Instrument

For assessing students' satisfaction with instructor performance in 19 English courses, a five-point Likert scale which was anchored from 1 by 'absolutely disagree' to 5 by 'absolutely agree' was used. The middle option 'Neither agree nor disagree' was also available on the scale. Table 5 shows the initial key factors for determining students' satisfaction with instructor performance in the CSS. The analysis tool used for data analysis was SPSS. In order to determine the instrument's internal consistency reliability, the Cronbach's Alpha coefficient was used. Also, the component rotation matrix coefficient was utilised in order to determine what items need to be extracted and kept for further analysis. In addition, correlation matrix, beta coefficients, and regression analysis were applied (Kumar and Sharma, 2018; Verma et al., 2021; Verma and Kumar, 2021) to demonstrate the relationships between 24 factors and whether multi-collinearity exists among the five variables.

Table 5 Key factors for determining students' satisfaction with teaching performance

No.	*Items*	*Content*	*Variables*
1	TTHP1	Course content, objectives, learning outcomes, and expectations were notified either verbally or in the syllabus.	Course information delivery
2	TTHP2	The course syllabus was introduced and discussed with me in detail.	
3	TTHP3	Learning methods of the course were introduced to me.	
4	TTHP4	Assessment content and forms were introduced and explained clearly at the beginning of the course.	
5	TPSP1	The instructor was often on time.	Instructor's performance
6	TPSP2	The instructor treated all students fairly and respectfully.	
7	TPSP3	The instructor welcomed and encouraged questions and comments.	
8	TPSP4	The instructor created a friendly and cooperative learning environment.	
9	HDGD1	The course content satisfied the learning outcome in the syllabus.	Course content and instructor's teaching methods
10	HDGD2	The course provided an appropriate balance between instruction and practice	
11	HDGD3	The course allowed me to synthesise basic knowledge and skills.	

Table 5 Key factors for determining students' satisfaction with teaching performance (continued)

No.	*Items*	*Content*	*Variables*
12	HDGD4	The knowledge and/or theory of course were demonstrated in practice.	Course content and instructor's teaching methods
13	HDGD5	The instructor presented the content and the information clearly and in an organised manner.	
14	HDGD6	Teaching methods were used flexibly and effectively.	
15	HDGD7	The instructor encouraged me to become actively involved in the course's activities.	
16	HDGD8	The instructor stimulated students' learning and learning autonomy.	
17	KTDG1	The examinations, tests, and assignments measured my knowledge and skills in the course.	Assessment
18	KTDG2	The assignments, examinations, tests, and quizzes were relevant and useful.	
19	KTDG3	The testing and evaluation procedures were fair.	
20	KTDG4	The instructor provided comments and feedback on my examinations, tests, quizzes, and assignments on time.	
21	DGC1	I am satisfied with the course information delivery.	Course evaluation (Students' satisfaction)
22	DGC2	I am satisfied with the instructor's performance.	
23	DGC3	I am satisfied with the course content and the instructor's teaching methods.	
24	DGC4	I am satisfied with the assessment.	

4 Data analysis and results

4.1 Results of CSS reliability analysis

Table 6 reports the results of the reliability analysis of the variables and presents the alpha coefficients. The alpha reliability means a score of all five variables is 0.89 ($\alpha = 0.89$), which can generally be considered satisfaction at 0.7 (Kumar et al., 2021, 2017; Kumar and Sharma, 2017, 2016; Henson, 2001). The subscale reliability was high for all five dimensions. The Cronbach's alpha coefficients for the five dimensions are:

1 0.917 for course information delivery

2 0.866 for instructor's performance

3 0.925 for course content and instructor's teaching methods

4 0.896 for assessment

5 0.873 for course evaluation.

In addition, the value of corrected item-total correlation among the items is higher than 0.6 which can be an acceptable value for remaining all the items (Hair et al., 2009). The corrected item-total correlation value for the *course information delivery* ranged from

0.764 to 0.851, with the *instructor's performance* being between 0.699 and 0.810, and the *course content and instructor's teaching methods* ranged from 0.708 to 0.789, and the course, evaluation ranged between 0.686 and 0.784.

Table 6 The results of the reliability analysis of the CSS

Variables	*Items*	*Corrected item – total correlation*	*Cronbach's alpha if Item deleted*	*Cronbach's alpha (mean score = 0.89)*
Course information delivery	TTHP1	0.849	0.880	0.917
	TTHP2	0.851	0.877	
	TTHP3	0.764	0.910	
	TTHP4	0.783	0.901	
Instructor's performance	TPSP1	0.699	0.873	0.886
	TPSP2	0.810	0.831	
	TPSP3	0.737	0.859	
	TPSP4	0.763	0.850	
Course content and instructor's teaching methods	HDGD1	0.711	0.918	0.925
	HDGD2	0.708	0.918	
	HDGD3	0.772	0.913	
	HDGD4	0.726	0.916	
	HDGD5	0.756	0.914	
	HDGD6	0.789	0.911	
	HDGD7	0.751	0.914	
	HDGD8	0.760	0.913	
Assessment	KTDG1	0.735	0.878	0.896
	KTDG2	0.809	0.851	
	KTDG3	0.764	0.867	
	KTDG4	0.768	0.866	
Course evaluation (students' satisfaction)	DGC1	0.686	0.853	0.873
	DGC2	0.722	0.840	
	DGC3	0.784	0.816	
	DGC4	0.724	0.839	

4.2 Results of factor analysis

A confirmatory factor analysis with a component rotation matrix was performed to remain factors relevant to students' satisfaction and to examine the validity of the instrument and what items need to be extracted and kept for further analysis. In this study, five factors were expected with high subscale loadings for the CSS. An initial examination of the data in Table 7 revealed five factors that had Alpha coefficients between .0.873 and .0.917. However, the examination of the component rotation matrix (Table 5) determined that the instrument has only four components:

1 course content and instructor's teaching methods

2 assessment

3 course information delivery

4 instructor's performance.

Table 7 The results of the component rotation matrix analysis of the CSS

	Component			
	HDGD	*KTDG*	*TTHP*	*TPSP*
HDGD6	0.823			
HDGD5	0.777			
HDGD7	0.776			
HDGD8	0.770			
HDGD4	0.671			
HDGD3	0.652			
HDGD2	0.550			
HDGD1	0.510			
KTDG2		0.824		
KTDG3		0.795		
KTDG4		0.771		
KTDG1		0.761		
TTHP1			0.849	
TTHP2			0.848	
TTHP4			0.805	
TTHP3			0.789	
TPSP2				0.828
TPSP4				0.776
TPSP1				0.762
TPSP3				0.727

The factor loadings on the *course content and instructor's teaching methods* variable were satisfactory and ranged from 0.510 to 0.832 variance, it should be greater than 0.5 (Jha et al., 2022; Kumar et al., 2021). The other three satisfactory components which had eigenvalues were between 0.453 and 0.761 (*assessment*), from 0.789 to 0.849 (*course information delivery*), and between 0.727 and 0.828 (*instructor's performance*), respectively. A possible explanation is students are mainly connected with instructional issues, course information, and assessment. An analysis of items in each factor shows that out of 24 items in the initial stage, 20 items remain at the reliable levels for further analysis and four items were subtracted since the last four items DGC1, DGC2, DGC3, and DGC4, which were expected to form component 5, were not relevant to students' satisfaction. Table 5 also reports that two items HĐGD1 and HĐGD2 both converge the *course content and instructor's teaching methods* (component 1) and *assessment* (component 2). However, the factor loading value of these two items in component 1 is 0.550, and 0.510, respectively larger than those in component 2 (0.453, 0.491). Therefore, the items HDGD1 and HDGD2 are remained in Component 1 and are removed from component 2.

4.3 Results of correlation and regression analysis

In order to demonstrate the relationship between the *dependent variable*, student satisfaction, and the four-predictor *independent variables*: *course content and instructor's teaching methods*, *assessment*, *course information delivery*, and *instructor's performance* as well as to investigate whether multi-linearity exists between independent variables and dependent variable; the data were investigated by regression and correlation analysis. The *dependent variable*, namely Y, is students' satisfaction whereas the independent variables are coded as follows:

X1 Course content and instructor's teaching methods.

X2 Assessment.

X3 Course information delivery.

X4 Instructor's performance.

4.3.1 Results of correlation analysis

The results in a correlation matrix shown in Table 8 demonstrate that the proposed four factors (independent variables X1, X2, X3, X4) are positively correlated with satisfaction (dependent variable Y) with instructor performance in English courses.

The correlation matrix (Table 8) indicates that *course content and instructor's teaching methods* are positively and significantly correlated with students' satisfaction ($r = 0.691$, $p < 0.01$). The results illustrate that *assessment* positively and significantly affects the students' satisfaction ($r = 0.695$, $p < 0.01$). Likewise, there is also a significant and positive relationship between the *course information delivery* and students' satisfaction ($r = 0.454$, $p < 0.01$). Similarly, the *instructor's performance* impacts positively and significantly on students' satisfaction ($r = 0.530$, $p < 0.01$) Therefore, it can be concluded that all variables meet the requirement of reliability and regression analysis.

Table 8 Results of correlations analysis of the CSS

X1 Course content and instructor's teaching methods	Pearson correlation (r)	0.691**
	Sig. (two-tailed)	0.000
	N	438
X2 Assessment	Pearson correlation	0.695**
	Sig. (two-tailed)	0.000
	N	438
X3 Course information delivery	Pearson correlation	0.454**
	Sig. (two-tailed)	0.000
	N	438
X4 Instructor's performance	Pearson correlation	0.530**
	Sig. (two-tailed)	0.000
	N	438

Notes: **Correlation is significant at the 0.01 level (2-tailed); ratings are based on a five-point Likert scale ranging from 1, 'absolutely disagree', to 5, 'absolutely agree'.

Each construct demonstrates a significant relationship with overall satisfaction with instructor performance in English courses. However, *course content and instructor's teaching methods* and *assessment* account for about 70% of the variance (r = 0.691 and r = 0.695, respectively). Therefore, the universities and departments should put more effort with respect to these two factors to retain high satisfaction levels with instructor performance in English courses among undergraduates.

4.3.2 Results of regression analysis

To illustrate the variability of the criterion variable, an analysis of the variance test was carried out. Table 9 shows that ANOVA's significant value is 0.000 < 5% taking into account that the total variability of the criterion variable is divided between the parts which can be attributed to regression and the residual parts.

Table 9 Result of regression ANOVA[a] analysis

Model		*Sum of squares*	*df.*	*Mean square*	*F*	*Sig.*
1	Regression	89.481	4	22.370	155.080	0.000[b]
	Residual	62.460	433	0.144		
	Total	151.941	437			

Notes: [a]Dependent variable Y = students' satisfaction.
[b]Predictors: (Constant), X4, X2, X3, X1.
n = 438.

Moreover, Table 10 explains that 58% of the variation in the dependent variable is declared by the adjusted R^2 value, i.e. the four factors together illustrate about 58% of the variance in students' satisfaction with instructor performance in English courses (adjusted $R^2 = 0.58$). This result showcases that to improve students' satisfaction with instructor performance in English courses offered by DThU, the universities should focus on the four factors identified. These four factors can also be used for measuring the overall satisfaction with other courses among departments and campuses.

Table 10 Model summary

Mode	*R*	*R square*	*Adjusted R square*	*Std. error of the estimate*
1	0.767[a]	0.589	0.585	0.37980

Notes: [a]Predictors: (Constant), X4, X2, X3, X1. n = 438.

Table 11 Results of regression analysis on satisfaction with instructor performance in English courses[a]

Model		*Unstandardised coefficients*		*Standardised coefficients*	*t*	*Sig.*	*Collinearity statistics*	
		Beta	*Std. error*	*Beta*			*Tolerance*	*VIF*
1	(Constant)	0.365	0.163		2.242	0.025	0.450	
	X1	0.349	0.047	0.340	7.406	0.000	0.524	2.220
	X2	0.420	0.045	0.397	9.325	0.000	0.613	1.907
	X3	0.005	0.038	0.005	0.139	0.890	0.577	1.631
	X4	0.134	0.038	0.143	3.523	0.000	0.450	1.734

Notes: [a]Dependent variable: Y.n = 438.

Table 11 presents regression analysis results, which showcase the degree to which the four factors explicate students' satisfaction with the instructor's performance in English courses. Three (X1, X2, X4) out of the four factors have a significant and positive effect to explain satisfaction with the instructor's performance in English courses since the significant value of all three factors is 0.000 (< 0.05). In contrast, the factor X3 does not affect Y because it is sig. value is 0.890 (> 0.05).

In addition, the VIF value of all independent variables is smaller than 10 which leads to the conclusion that no multi-collinearity existed among the four independent variables. Therefore, a linear regression model is defined as follows:

$$Y = \varepsilon + 0.340X_1 + 0.397X_2 + 0.143X_4$$

This linear regression model demonstrates that all three independent variables X1, X2, and X4 have a positive and significant effect on dependent variable Y since all their Beta (β) value is positive (0.340, 0.397, and 0.143, respectively). This result leads to the conclusion that when each independent variable (X) increases, the dependent variable Y increases and vice versa. Moreover, the Beta value indicates the degree of impact of each independent variable on the dependent variable. Their impact degree will be explained as follows:

The beta value of the independent variable X1 (*course content and instructor's teaching performance*) is 0.340 which predicts that when the independent variable X1 increases one unit, the dependent variable Y (*students' satisfaction*) increases 0.340 units.

The beta value of the independent variable X2 (*assessment*) equals 0.397 which indicates when the independent variable X2 increases one unit, the dependent variable Y (*students' satisfaction*) will increase by 0.397.

The beta value of the independent variable X4 (*instructor's performance*) is 0.143 which estimates that when the independent variable X4 increases one unit, the dependent variable Y (*students' satisfaction*) increases by 0.143.

It can be concluded that of the three independent variables X, the two variables X2 (*assessment*) and X1 (*course content and instructor's teaching performance*) have a high positive impact while X4 (i*nstructor's performance*) has a low impact on the dependent variable Y. This result suggests that if universities are to improve students' satisfaction with instructor performance in English courses, they should focus on the two identified factors: assessment and course content and instructor' teaching performance. These two factors can also be suggested for measuring the overall satisfaction with other courses among departments and campuses.

5 Discussion and findings

The study identified four factors: course *content and instructor's teaching methods*, *assessment*, *course information delivery*, and *instructor's performance* for determining students' satisfaction in English courses play practical roles in the future of the teaching and learning process in HEIs in diverse ways and have a positive influence on students, teachers, and universities. These independent and dependent variables have positive and significant relationships, that lent good support to this study. Students are given the priority to any university so, the university must keep in mind their basic needs for education such as course selection, course content, teaching method, course information,

assessment, and the level of satisfaction. Moreover, the instructor's performance is very important to attract the students and make them satisfy. If the students are not satisfied with the teaching style, this is the university's responsibility to take care of students and hire the best level of teachers (Chen et al., 2015; Dinh and Nguyen, 2020).

Students will be the prior beneficiaries of a learning process since satisfied students are more likely to attend classes and gain their learning achievement more easily than unsatisfied students (Dinh and Nguyen, 2020). Therefore, satisfaction with English courses contributes to motivation and can be predicting factors of students' academic success or failure and students' dropout intentions (Dinh et al., 2021).

Furthermore, English language instructors in Vietnam in general and in Dong Thap University, in particular, will benefit from the findings of this study. These four factors, i.e., course *content and instructor's teaching methods*, *assessment*, *course information delivery*, and *instructor's performance*, relating to students' satisfaction can offer them valuable information so that they can evaluate their teaching performance and improve the quality of instructions (Nguyen, 2021).

In the HEIs context, the findings in this study can serve as a road map for evaluating the effectiveness of the faculties, departments, programs, and courses. The data analysis highlights the areas in which universities could work more in terms of evaluation and improvement to achieve larger gains in instructor performance satisfaction levels (Tran and Do, 2020). The ongoing improvements can both maintain the existing numbers of students and potentially attract more students in the future. Therefore, these four factors can be suggested for measuring the overall satisfaction with other courses and for both internal and external benchmarking of teaching performance among departments and campuses since universities can 'pursue a commitment to continuous improvement' (McClenney, 2006). Therefore, the four factors contribute to the successful process of educational supply chain management in HEIs.

In addition to the existing literature, formal surveys that assess undergraduate students' satisfaction with instructor performance in English courses are not yet available at DThU. Additionally, the DThU campus lacks comparability with peer departments and courses on critical aspects of instructor performance in terms of quality assurance techniques. Since benchmarking is about self-evaluation, good practice, and improvement, HEIs in general and DThU, in particular, can use benchmark tools to obtain systematic evidence about their effective educational practices, set targets for excellence, and hone academic service to improve students' success (McClenney, 2006; Camp, 1998). Furthermore, "benchmarking is a learning process that calls for trust, understanding, proper practice selection, and adaptation in order to improve" [Horton, (2011), p.7]. The current study highlights the theoretical contribution to the existing literature. Based on the results of this study, the students evaluate and measure the best university to take admission and course while the university sets the criteria to measure its students' satisfaction.

6 Conclusions

This study concludes that among factors affecting students' satisfaction with instructor performance in English courses, the proposed four factors were found to be important and were positively correlated with Vietnamese undergraduate students' satisfaction with instructor performance in English courses offered by Dong Thap University. An initial

examination of the data in Table 4 revealed five factors that had an Alpha reliability mean score of all five variables is 0.89 ($\alpha = 0.89$). However, the results of factor analysis determined that the instrument has only four components. The four satisfactory factor loadings on the *course content and instructor's teaching methods* variable ranged from 0.510 to 0.832 variance, on *assessment* variable were between 0.453 and 0.761, on *course information delivery* were from 0.789 to 0.849, and on *instructor's performance* between 0.727 and 0.828, respectively. Furthermore, the linear regression formula is defined as

$$Y = \varepsilon + 0.340X_1 + 0.397X_2 + 0.143X_4$$

Satisfaction with instructor performance in English courses cannot guarantee improvement in teaching and learning outcomes. However, low levels of student satisfaction unfavourably influence student learning outcomes. Even though students' satisfaction plays a vital role in enhancing the learning outcomes, it must not be considered the sole factor that can impact students' performance. Therefore, future research is needed to examine the relationship between students' satisfaction and their learning outcomes/performance. Furthermore, the additional studies suggested are internal benchmarking of teaching performance and research performance with the peer departments in the process of educational supply chain management in HEIs. Additionally, empirical research on experts' suggestions and/or evaluation of end-user customers' satisfaction in the education sector should be conducted to fulfil the limitation of this study in terms of suitable factors to develop sustainable growth in HEIs.

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Appendix

Table A1 Abbreviations (complete explanations of the abbreviations used in study)

HEI	Higher educational institution
CSS	Course satisfaction survey
DThU	Dong Thap University
EFL	English as a foreign language
FLF	Foreign languages faculty
ANOVA	Analysis of variance
VIF	Variance inflation factor
SERVQUAL	Service quality