The Situation of Managing Information Technology Application Activities in Teaching English at High Schools according to the TQM Approach in Ho Chi Minh City, Vietnam

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Abstract

Total Quality Management (TQM) is considered one of the most important approaches to improve the quality of education in general and subjects in particular. This article uses the TQM approach to study the current management of information technology (IT) application activities in teaching English at high schools in Ho Chi Minh City. This research project employed a mixed method combining both quantitative and qualitative inquiries. Data collection includes quantitative data through questionnaires to collect information from 87 managers and 108 teachers selected by a stratified and random sampling process, qualitative data through interviews with semi-structured consultations with 30 administrators and teachers. The findings show that the management of IT application activities in English teaching at high schools still has many limitations and inadequacies. Typically, there is a lack of facilities and difficulties in purchasing and using unified software. Teachers still have limited IT skills in designing lessons, and coordination is not synchronized between schools and relevant partners in the teaching-learning activities. Based on the findings, the authors propose some solutions to manage this activity according to the TQM approach to improve the quality of teaching English to meet the requirements of educational digital transformation and international integration today.

Keywords: *Total Quality Management (TQM), Information Technology (IT), teaching English.*

1. Introduction

The rapid development of IT along with the digital world's development trend has helped improve students' language skills by providing learning tools and resources. In particular, videos, online lectures, and mobile applications make learning English more enjoyable (Genclter, 2015). However, from another perspective, this also causes negative effects on learners, such as wasting time on games, movies, music idols, or imitating online harmful "trends". All these problems prove that the application of IT in teaching English must be controlled and have effective management solutions. Otherwise, it may reduce

learners' ability to absorb, pressure teachers, or negatively affect the safety and security of information in cyberspace (Nomass, 2013). Therefore, this is an urgent problem and it is time for managers to research how to innovate management to improve the quality of English teaching and learning.

2. Research Objectives

The main purposes of this study are as follows:
1. Study the theoretical basis of applying the TQM model in managing information technology application activities in English teaching
2. Analyze the situation of managing information technology application activities in teaching English at high schools according to the TQM approach in Ho Chi Minh City, Vietnam. This is the basis for proposing solutions to improve the management of IT application activities in English teaching and achieve indicators to evaluate the level of digital transformation in education.

3. Research Questions

This study was carried out to answer the following questions:
1. What is the level of awareness of administrators about the management of IT application activities in teaching English at high schools in Ho Chi Minh City?
2. What is the current management of IT application activities in English teaching according to the TQM approach at high schools in Ho Chi Minh City, Vietnam?

4. Literature Review

4.1. Managing information technology application activities in English teaching according to the TQM approach

Total **Q**uality **M**anagement (TQM) is a management philosophy that emphasizes continuous improvement, participation of all members of the organization, customer focus, and data-driven management. In education, TQM helps improve the quality of teaching and learning through a quality management system consisting of 3 components: Input, process, and output of an overall process. From this perspective, the quality of teaching and learning activities of general subjects in high schools is formed from the effective quality management of three basic components: Input, process, and output (Djuhartono et al., 2021) Currently, management according to the proposed TQM approach is highly appreciated by many experts in managing IT application activities in English teaching and has brought positive signals (Pineda, 2013).

In particular, Dawood (2013) suggested a management model of IT application activities for teaching English in EFL (**E**nglish as a **F**oreign **L**anguage) classes according

to the TQM approach and stated that the process of continuous improvement and reflection data gradually built an organization's quality culture. He also argued that continuous improvement played an important role in TQM. The most important for implementing continuous improvement and quality improvement was using Deming's circle (**P**lan - **D**o - **C**heck - **A**ct/Action) with the effective statistical tool SPC (**S**tatistical **P**rocess **C**ontrol) and the quality management tool SQC (**S**tatistical **Q**uality **C**ontrol) to control the process. In addition, in the process of applying TQM, SWOT analysis (Strengths – Weaknesses – Opportunities – Threats) is one of the analysis tools used to analyze the situation effectively. The SWOT analysis model can be considered the most basic analysis method, useful for observing problems from four different perspectives. In SWOT analysis, strengths and weaknesses are included in internal factors, while opportunities and threats are listed as external factors. Strengths and weaknesses are considered internal positive and negative factors, while opportunities and threats are considered external factors (Keban et al., 2019). Therefore, this study is based on the TQM approach and applies the PDCA cycle in each input, process, and output stage of the management process. At the same time, this study explores the relationship or interaction between internal factors (strengths and weaknesses) with external factors (opportunities and threats) to analyze the situation of managing information technology application activities in teaching English more clearly.

4.2. Theoretical framework for managing IT application activities in English teaching according to the TQM model

To match the trend of outstanding development of IT and digital devices, Nehad and colleagues (2016) in the research project "Effectiveness of Total Quality Management (TQM) in the English Language Teaching Community" identified educational institutions teaching English as a second language needing to continuously improve IT application activities in teaching English to stimulate excited learning for learners. In addition, schools also need to apply an effective management model or form to manage IT application activities in English teaching from the early stages from planning, preparing facilities, and arranging classes, developing programs, managing teaching activities and evaluation to develop 4 language skills to meet the requirements of output standards or goals according to the proposed roadmap. From there, the authors state that if approached according to the TQM model, managers will be able to manage quality at all stages as above systematically and throughout the process. Furthermore, TQM has the advantage of a comprehensive approach that allows all customers including teachers, students, and partners to participate and contribute to the school's quality improvement process. The outstanding feature of the total quality management model TQM is that provides an effective management system that improves all aspects related to quality management and at the same time mobilizes the participation of all departments and individuals to achieve the set quality objectives (Neehad et al., 2016). Besides, the application of the TQM model to management also shows that there is a synchronous combination of the principal's management

functions. With the feature of continuous improvement, managers can easily update specific management activities in the process phase of handling according to the development trend of society at each stage by the characteristics of each school (Dawood, 2013).

Based on the theories above, the authors approach the management of IT application activities in teaching English at high schools in Ho Chi Minh City, Vietnam according to the TQM approach. This model includes 3 phases: input, process, and output of a continuous improvement process to enhance the quality of teaching and learning English. When applying the theoretical framework for managing IT application activities in teaching English according to the TQM approach, the management stages are implemented in detail as follows:

Input management: Input factors include: Creating a feasible strategic plan by the school's educational plan and according to the direction of the Department of Education; Managing the teaching staff - Training on the TQM management model, improving awareness, expertise, and IT skills; Managing the quality of incoming students: Develop plans for entry-level enrollment and organize effective classes; Manage resources well to ensure facility conditions to serve teaching activities.

Process management: Includes contents such as building and organizing well-working groups/teams and creating a positive competitive atmosphere, without pressure for achievement; Specifically, from the teaching practice at high schools in the period of digital transformation of education, the authors identify 4 specific activities that need to be managed in the process phase namely: 1) IT application activities to prepare for teaching; 2) IT application activities to develop learning materials; 3) IT application activities to test and evaluate students' learning results; 4) IT application activities to build an interactive learning environment. There is an effective systematic approach to managing 4 activities according to the PDCA cycle; All members share and cooperate to comply with work quality requirements; There is a commitment to quality between customers inside and outside the school; Set up a system of SPC and SQC quality control management tools.

Output management: Output factors include: Improving learning quality as well as the moral qualities of students; Strengthening cooperation with partners to raise international standards; Gradually building a quality cultural environment; and efforts for continuous improvement throughout the system.

From there, the authors propose a theoretical framework for research on the management of IT application activities in teaching English at high schools according to the TQM model as picture 1 below.
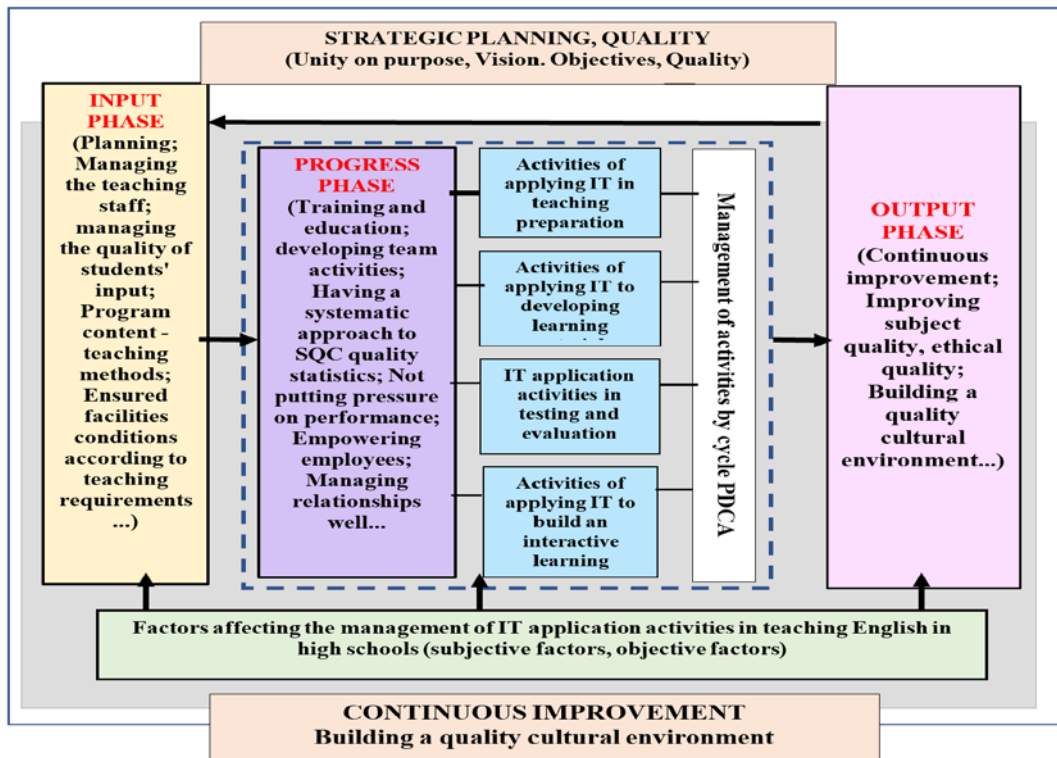
Picture 1: The theoretical framework for managing IT applications activities in teaching English at high schools according to the TQM model (Source: Researched and synthesized by the authors)

5. Research methodology

5.1. Research design

This study is a combined method of quantitative and qualitative research to systematically combine their advantages. Regarding quantitative methods, the questionnaire was applied from the beginning of the study to survey 87 managers and 108 teachers selected randomly and stratified. Questionnaires are considered one of the good ways to collect data of randomly selected participants. Qualitative was applied in the second part of this study. The qualitative method was conducted using semi-structured interviews to further clarify the quantitative data and express more opinions, awareness, and experiences of the interviewees. The interview schedule was agreed upon with the respective interviewees of 30 managers and teachers based on their comfort and availability. In particular, the information provided by survey participants for their research purposes and personal information will be kept confidential.

5.2. Data Analysis

For quantitative data: Use SPSS software for descriptive statistics, t-TEST test, and correlation test between independent variable and dependent variable. For qualitative data: Use content analysis methods, and research educational products to compare and contrast data to supplement and clarify issues raised by quantitative data. In this study, the ratings of managers and teachers for the dependent and independent variables are based on a 5-point Likert scale (Jackson, 2015).

Table 1: Likert scale 5-point

Likert - Scale Description	Likert - Scale	Likert - Scale Interval
Strongly disagree/ Completely unnecessary	1	1.00-1.80
Disagree/Unnecessary	2	1.81-2.60
Partly agree/ Quite necessary	3	2.61– 3.40
Agree/Necessary	4	3.41-4.20
Strongly agree/ Completely necessary	5	4.21-5.00

6. Research findings

This section focuses on how data is analyzed and how it is interpreted in a meaningful way. The tables provide survey data, then the authors compare the interview data as well as research information from educational products to find answers to the specific research questions of the research topic.

6.1. The current state of awareness of management staff about the necessity of criteria for managing IT application activities in English teaching based on the TQM approach

The study examines the level of awareness of administrators about the necessity of 11 criteria for managing IT application activities in teaching English according to the TQM approach (Nehad et al., 2016). The results are obtained through the following data table.

Table 2: Perception of management staff about the necessity of content management activities applying IT in teaching English to the TQM approach

N_1	Content	% **Level of necessary** (*Management staff*; N=87)					Mean	Standard deviation
		1	**2**	**3**	**4**	**5**		
1	The principal makes strategic plans with foresight to manage IT application activities in English teaching based on SWOT analysis each school year	0	0	6.9	6.9	6.2	4.79	0.553

N_1	Content	% Level of necessary (*Management staff*; N=87)					Mean	Standard deviation
		1	2	3	4	5		
2	The school community clearly understands the goals to be achieved of the overall quality management system for applying IT to English teaching	0	0	14.9	46.3	36.8	4.22	0.689
3	Meet the needs of customers inside and outside the school	0	2.3	24.1	39.1	34.5	4.06	0.826
4	There is a team of teachers and administrators with IT skills and English standards that meet or exceed standards	0	3.4	34	16.1	49.4	4.11	0.970
5	Focus on quality development and personality development of students	0	0	1.1	33.3	66.5	4.64	0.505
6	Do not put pressure on achievement, create an atmosphere of competition, positivity, and self-discipline in working and studying in school.	0	2.3	33.3	55.2	9.2	3.71	0.663
7	Form cultural standards, values, beliefs, and behaviors that all members share and cooperate in implementing work quality requirements.	0	0	0	33.3	66.7	4.67	0.474
8	Build good relationships with internal and external customers, cooperate and coordinate with each other to achieve common goals	0	2.3	36.8	25.3	35.6	3.94	0.907
9	Establish SPS quality control tools using statistical tools to maintain a basis for quality improvement in the teaching process	0	0	31	32.2	36.8	4.06	0.826
10	The school system mobilizes and coordinates all resources in the system to carry out activities according to a clear and specific evaluation criteria process	0	0	12.6	39.1	48.3	4.36	0.698
11	Implement continuous improvement in the management of IT application activities in English teaching each semester and each school year	0	0	0	32.2	36.8	4.68	0.470
	Overall mean/ Overall standard deviation						4.29	0.689

Recorded from the results, the overall average score is **4.29** - **0.689**, the majority of administrators completely agree with the above content on the necessity of criteria for managing IT application activities in teaching English following the TQM approach at a fairly high level. Through interviews with managers and teachers, the authors received many similar opinions on items 1, 2, 5, 7, and 11. This shows that the majority of managers have a fairly complete awareness of the need for criteria to manage IT application activities in English teaching according to the TQM approach. However, it must also be acknowledged that there is still a large proportion of "Not necessary" opinions (criteria 6,

8, 9, 10). Typically, criterion 6 "*Does not put pressure on achievement, creates an atmosphere of competition, positivity, and self-discipline in working and studying in school*", only 9.2% of administrators said that this criterion is "Completely necessary" and 2.3% of managers think this criterion is "*Not necessary*". This issue needs to be thoroughly considered by management because this is one of the management factors. Inputs of TQM - Building a working environment with a friendly atmosphere, without pressure for achievement so that everyone is free to promote their abilities and accomplish common goals. To better understand this issue, through interviews with management 1, he said that because some teachers are very afraid of change, calling for self-discipline or creating an atmosphere of innovation in the school is difficult, even for some teachers. uncooperative, a part of the teachers seem indifferent, and not interested in activities in the schools. Therefore, some schools still have to apply achievements in considering emulation or rewards to limit this situation. On the other hand, school principals need to pay attention to relieving the obsessive pressure on quality for school members. This shows that a small number of administrators have not truly appreciated the role of the collective, and have not been able to create motivation or persuasion to lead all members of the school to voluntarily make changes in management. Manage IT application operations and improve the quality of English teaching.

Thus, through a survey of managers' awareness of TQM criteria, the results show that managing IT application activities in English teaching according to the TQM approach is an urgent issue today. Managers need to organize, design, and deploy a management system for applying IT to English teaching according to TQM throughout from input to output, and need to train all relevant forces internally and externally. Most importantly, managers must clearly understand the criteria, and how to organize and coordinate implementation so that it is synchronous and brings the highest possible efficiency.

6.2. The current status of management of IT application activities in English teaching according to the TQM approach at high schools in Ho Chi Minh City, Vietnam

Table 3: Opinions of administrators and teachers on the work the Principal has done in 3 stages: Input, process, and output to manage IT application activities in teaching English in high schools in Ho City Chi Minh followed the TQM approach

Content	% level of agreement				
	Manager (N=87)		Teacher (N=108)		Sig
	Mean	Standard deviation	Mean	Standard deviation	
A. Input phase	**3.86**	**0.668**	**3.67**	**0.739**	
1 Make a feasible strategic plan in line with the school's educational plan	4.01	0.691	3.89	0.717	0.062

	Content	% level of agreement				
		Manager (N=87)		Teacher (N=108)		Sig
		Mean	Standard deviation	Mean	Standard deviation	
2	Develop a plan for enrollment at the beginning of the school year, organize effective classes	3.67	0.474	3.33	0.627	0.532
3	Training management according to the TQM model, improving IT expertise and skills for teachers	4.07	0.818	4.06	0.747	0.564
4	Prepare resources to ensure physical facilities for teaching activities	3.68	0.688	3.40	0.867	0.234
B. Process phase		**3.79**	**0.746**	**3.58**	**0.782**	
5	Build and organize groups or workgroups well	3.97	0.865	3.22	0.771	0.000
6	Create a positive competition atmosphere so as not to put pressure on achievements	3.68	0.688	3.70	0.867	0.234
7	Having a systematic approach to effective operations management	3.72	0.584	3.25	0.887	0.206
8	All members share and cooperate to comply with quality requirements	4.03	0.584	4.02	0.753	0.319
9	There is a commitment to quality between customers inside and outside the school	3.97	0.948	3.96	0.831	0.492
10	Set up SPC and SQC quality control management tools system	3.42	0.805	3.34	0.583	0.334
C. Output phase		**3.51**	**0.643**	**3.25**	**0.689**	
11	Improve the quality of learning as well as the moral quality of students	3.53	0.680	3.23	0.838	0.218
12	Strengthen cooperation with partners to raise international standards	3.68	0.755	3.13	0.597	0.234
13	Step by step building a quality cultural environment	3.34	0.662	3.14	0.847	0.213
14	Continuous improvement efforts throughout the system	3.49	0.474	3.48	0.475	0.234
Overall mean/ Overall standard deviation		**3.73**	**0.694**	**3.51**	**0.771**	

The overall mean of managers and teachers are **3.73** and **3.51** respectively relatively well based on the Likert scale 5-point in which the results of each phase are evaluated specifically as the following.

6.1.1. The situation management of the input phase

At the input phase, the overall mean of the management staff (**3.86**) and the teachers (**3.67**) are relatively good. Only content 3 "*Management training according to TQM model, improving professional skills and IT skills for teachers*" records quite similar results

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between management staff and teachers. In other contents, there is quite a difference in the assessment between the management staff and the teachers, most of the teachers' assessment results are not as high as the assessment results of the management staff.

Therefore, to make it clearer, the authors exchange ideas with some teachers and note the teachers' sharing: "*In making educational plans, managers need to understand and assess teachers' difficulties, they have to teach both the content approach program in grades 11, and 12 and the innovative program towards competency in grades 10. So, principals should set appropriate striving rates and not follow rates that are too high and pressure teachers to achieve*" (Teacher 1).

The condition to ensure facilities is also a problem that affects many schools like this: "*The school does not have its multimedia room and the computer rooms are only for students to study Informatics. When necessary, English teachers registered to borrow. If studying in the classroom that faced problem the school does not have Internet covering all rooms. Of course, it is really difficult to organize learning activities with IT applications*" (Teacher 2). Also due to the difficulty of facilities, based on observations when visiting classes, the authors note that most of the classes have a very large number of about 40-50 students and each school usually has one or two computer rooms.

In general, it can be said that the current status of the Input phase is still very inadequate due to external influences such as the 10th-grade textbook reform program, the inconsistent curriculum regulations among grades, and patchwork. Particularly, if schools have with poor facilities, the quality of students' input in class placement is also a concern because they are not tested for foreign language ability (Nehad et al., 2017). Moreover, large class sizes and limited network connections make the implementation of active learning methods and forms more difficult for teachers with limited IT expertise and skills (Djuhartono et al., 2021).

6.2.2. The situation management of the process phase

At the process phase, the overall mean of the management staff (**3.79**) and the teachers (**3.58**) are rated relatively well. However, there are still some opinions of management staff and teachers as the content of 5, 7, and 10 are evaluated only at an average level and had quite different evaluation levels between management staff and teachers. In general, most of the teachers' evaluation results are not as high as the management staff's evaluation results. Therefore, to test whether there is any significant difference between the evaluation opinions of managers and teachers, the authors perform the t-test. The t-test results show that item 5 has a value of **Sig=0.00<0.05**, so it can be concluded that there is a difference between the two groups of managers and teachers in assessing the content "*Build and organize well groups/ working group*" (Wagner III, 2019).

When discussing this issue with managers, manager 2 said: *"The Principal has assigned a team of Informatics teachers and young teachers to support IT for teachers who are still lacking in IT skills"*.

To clarify this problem, the authors interviewed a group of teachers, and 22/24 teachers agreed with the opinion that teacher 3 shared: *"The assignment of IT support groups is still difficult. Because the school does not have its technical teams, it is mainly assigned to Informatics teachers, but Informatics teachers still have to teach according to their number of periods, so they do not have time to support teachers in time"*.

When reviewing the school's summary reports and from in-person observations, the authors note that teachers are still "confused" about implementing the management contents because there is no detailed implementation system. There are no guiding documents and clear criteria, no handover procedures and forms, responsibilities in equipment management, and assignment of responsibilities. Most notably, although the plans are well-made, the recording of performance results is usually only shown in written reports, not systematically kept by the organization, statistics and data are still performed using Microsoft Excel. So, in addition to exploring the general management activities of the Principal, the authors continue to explore more deeply the situation of managing the process of applying IT in teaching English at high schools through 4 main activities:

The current situation of managing activities of applying IT in teaching preparation

The results of assessing the current situation of managing IT applications in teaching preparation are shown in the following table.

Table 4: Managers' and teachers' opinions evaluating the current situation of managing IT application activities in teaching preparation of teachers

N₃	Content	% level of agreement				
		Manager (N=87)		Teacher (N=108)		Sig
		Mean	Standard deviation	Mean	Standard deviation	
1	Develop a training plan for teachers to prepare and apply active teaching methods and techniques.	4.49	0.503	4.18	0.695	0.645
2	Directing teachers to prepare lesson plans by the steps of lesson design with IT applications	4.63	0.612	4.13	0.671	0.000
3	Training on the TQM management model, improving vomiting, IT capacity for teachers	4.36	0.628	4.33	0.580	0.239
4	Directing teachers to self-study using teaching software	4.51	0.729	4.43	0.615	0.548
5	Organizing seminars, attending lectures on IT application activities	4.51	0.729	4.43	0.615	0.548

6	Directing teachers to effectively use software to help promote 4 skills	4.35	0.725	4.15	0.841	0.459
7	Directing teachers to prepare and organize teaching activities focusing on increasing teacher-student and student-student interaction	4.28	0.659	4.25	0.435	0.523
8	Directing teachers to manage the use of equipment and share lectures	4.21	0.649	4.16	0.738	0.457
9	Regularly evaluate, commend, and reward promptly and replicate the typical example	4.47	0.662	4.18	0.830	0.564
	Overall mean/ Overall standard deviation	**4.41**	**0.646**	**4.22**	**0.675**	

The results in the table above record that the overall mean rating of managers and teachers are respectively **4.41** and **4.22** as rated high. The results of the t-test in item 2 with the value **Sig = 0.00 < 0.05** give us the conclusion that there is a difference between the two groups of managers and teachers in the evaluation of "*Directing teachers to prepare lesson plans by the steps of lesson design lectures with IT applications*" (Wagner III, 2019).

When exchanging about this problem with managers, manager 2 says: "*Most of the teachers have used IT applications activities for preparing lesson plans very well because they have been trained in module 9 of the Ministry of Education and Training*".

To clarify this idea, through interviews with 24/24 teachers, they all agreed with the teacher's opinion: "*The principal needs more support in applying IT to prepare PowerPoint lectures or E-learning lectures because it takes a lot of time to make the lecture lively. If teachers have support resources, funding as well as clear reward regulations, that makes teachers design complete digital lectures and deploy teaching activities with higher-quality IT applications*" (Teacher 4)

The current situation of management of information technology application activities in the development of learning materials

Through the opinions of management staff and teachers, the results are obtained in Table 5 below.

Table 5: Managers' and teachers' opinions evaluating the current situation of managing IT application activities in the development of learning materials

N₄	Content	% level of agreement				
		Manager (N=87)		Teacher (N=108)		
		Mean	Standard deviation	Mean	Standard deviation	Sig
1	Directing the establishment of a repository of lecture materials and a shared topic bank	4.31	0.577	3.94	0.701	0.000

2	Directing teachers to organize study groups, assigning students to exploit materials	4.53	0.805	3.79	0.671	0.000
3	Directing teachers to guide students to pay attention to the safety and security of information in cyberspace	3.83	0.795	3.77	0.605	0.424
4	Directing teachers to search for self-study materials to improve their IT expertise and skills	3.87	0.900	3.89	0.789	0.226
5	Directing teachers to access the digital learning system of the Ministry and Department, introduce them to students and student's parents	3.93	0.892	3.29	0.915	0.492
Overall mean/ Overall standard deviation		**4.09**	**0.793**	**3.74**	**0.736**	

The results in the table above record that the overall mean rating of managers and teachers are respectively **4.09** and **3.74** relatively well. Sig results in content 1 *"Directing the establishment of a repository of lecture materials, a shared topic bank"* = **0.000 < 0.05**, and content 2 *"Directing teachers to organize study groups, assigning students to exploit documents"* = **0.000 < 0.05** show that there is a difference in the assessment of these two contents according to the t-test (Wagner III, 2019).

Through talking about the problems, the Vice Principal says: "*The team leader has assigned specific targets to teachers in the English group to prepare lessons as well as guided students participating in science research for each grade*" (Manager 3).

To clarify this difference, through an interview, teacher 5 considers that *"Establishing a repository of shared lecture materials for teachers is a very useful idea. However, teachers need a lot of support from the school's Board of Directors such as funding for building the LMS (Learning Management System) platform, and resources to upload lectures by HTML5 standards"*.

In addition, data collected from educational products shows that building learning materials is still difficult. Those seem to be the challenges that the education industry faces to solve some problems due to the physical infrastructure networks such as investing and providing more financial support for educational institutions (Nomass, 2013). Furthermore, education experts should organize training sessions on digital citizenship skills for students to equip them with knowledge and skills to build an attitude of respect for intellectual property rights because the issue of intellectual property is still "quite new" to the world. high school students (Risa et al., 2022).

The current situation of managing information technology application activities in the organization of testing and evaluating students' learning results

Managers' and teachers' opinions are recorded in Table 6. The results also reveal that all evaluations are rather high.

Table 6: Managers' and teachers' opinions evaluating the current situation of managing IT application activities in the organization of testing and evaluating students' learning results

| N₅ | Content | % level of agreement | | | | |
| | | Manager (N=87) | | Teacher (N=108) | | Sig |
		Mean	Standard deviation	Mean	Standard deviation	
1	Directing the English team and teachers to select and agree on the form of assessment and evaluation	4.31	0.670	4.20	0.560	0.542
2	Directing the English Team and teachers to agree on the assessment and evaluation software	4.76	0.505	4.22	0.569	0.000
3	Directing teachers to report grades through the network system	4.36	0.610	4.68	0.526	0.340
4	Directing teachers to improve form, assessing students through IT application products and projects	4.57	0.542	4.36	0.538	0.248
5	Direct teachers to check the score entry system and proactively propose changes when necessary	4.44	0.642	4.31	0.523	0.458
	Overall mean/ Overall standard deviation	**4.49**	**0.593**	**4.35**	**0.543**	

The results show that the status of management IT application activities in the assessment of student learning outcomes of administrators and teachers are rated average as **4.49** and **4.35**, with a high level of agreement. Content 2 "T*he Principal directs the English team and teachers to agree on the assessment and evaluation software* " with the t-test result of **Sig = 0.000 < 0.05** shows that there is a difference between the two groups of managers and teachers in the assessment of this content (Wagner III, 2019).

Through an interview, manager 4 said: "*The selection of software that is consistent with other subjects will help the school be convenient in testing, issuing and reporting scores accurately as well as stably*".

Meanwhile, the teacher's opinion was that "*English has its characteristics, so it is not suitable when evaluating many skills at the same time. Most shared software or the website of the Department of Education mainly only allows multiple-choice tests, it is very difficult to test students' level with only multiple-choice questions and evaluate Listening, Speaking, Reading, and Writing skills at the same time*" (Teacher 6).

In addition, the final reports of the semester or the end of the school year, also show that teachers reflect a lot on the need to use unified and effective assessment and evaluation software with each specific skill. This is an important factor, so managers need to prioritize solutions to support teachers in approaching international standards (ILCE, 2020).

The current situation of managing information technology application activities to build an interactive learning environment

The results are recorded in Table 7 showing the opinions of managers and teachers. The results also reveal that all evaluations are rather high.

Table 7: Managers' and teachers' opinions evaluating the current situation of managing IT application activities in building an interactive learning environment

N_6	Content	% level of agreement				Sig
		Manager (N=87)		Teacher (N=108)		
		Mean	Standard deviation	Mean	Standard deviation	
1	Directing teachers to organize a combined teaching method, focusing on forming students' ability to self-study and create	4.84	0.370	4.30	0.516	0.541
2	Directing teachers to organize teaching activities, promoting activeness, and students' capacity	4.38	0.488	4.31	0.716	0.236
3	Directing teachers to organize a variety of forms: project work, experiential learning, theatricalization, fun club, scientific research	4.69	0.465	4.12	0.607	0.000
4	Directing teachers to monitor the learning process of students, helping students plan to improve their learning methods when needed	4.51	0.501	3.97	0.703	0.000
	Overall mean/ Overall standard deviation	**4.49**	**0.456**	**4.18**	**0.635**	

The results in the above table show that the overall mean of managers: is **4.49** - at a high level, and the overall mean of teachers is **4.18** - at a fair level. Through the t-test of items 3 and 4, the value **Sig = 0.000 < 0.05** shows that there are differences between the two groups of managers and teachers in the assessment (Wagner III, 2019).

Talking about the issues, Manager 5 considered that: *"The organization of many forms: project work, experiential learning, theatricalization, English Club, and scientific research will help students promote their learning capacity, be proactive and creative in self-study and help teachers discover and train many good students"*.

Meanwhile, the teacher's opinion is that: "*Directing teachers to organize diversification of teaching forms such as project-based teaching, experiential learning, theatricalization, English Club, scientific research on applying IT to promote the spirit of self-disciplined learning attitude and promote the creative capacity of students is difficult, if any, it can only be the object of Good and Excellent students*" (Teacher 7).

Besides, through attending the actual class, the authors find that there is still a part of teachers who have not applied IT to organize learning activities for students effectively, often teachers only assign homework or learning tasks. On the other hand, teachers rarely organize and monitor study groups, teachers only interact with students in the classroom, but the lesson time is short, and often only a few good and better students interact with the teacher. This is also a limitation that needs to be overcome (ILCE, 2020).

6.3. The situation management of the output phase

The output phase plays an important role in helping managers review the results and direct improvements in the next cycle because the output of this cycle will be the input of the next cycle. The results in Table 3 above show that the average score according to the general assessment of managers is **3.51** - Standard deviation **0.643**, ranked as Good, and the average score according to the general assessment of teachers is **3.25** - Standard deviation **0.689**, rated Average. Only criterion 11 received quite similar ratings between managers and teachers. The remaining criteria 12, 13, and 14 have relatively large differences. Specifically, criterion number 12 "*Strengthen cooperation with partners to raise international standards, gradually improve the quality of learning.*" Administrators rate it as Good (**3.68**) but teachers only rate it as Average (**3.23**).

To understand this issue more clearly, Teacher 8 shared more information: "*The proposal to buy software to review and test all 4 skills for students is impossible because the school does not have the funding*". Therefore, choosing software to test and evaluate skills depends on teachers, but most teachers usually let students do tests on Google Forms or Quiziz.

Many teachers also agree with Teacher 9's opinion: "*To test Listening skills you can use Flipgrid, to test Writing and Speaking skills you can use Testbig or other paid software but this is very time-consuming and difficult. The exam questions are not required so teachers do not guide students to do so, so raising international standards is difficult and needs more support from schools and parents*".

In general, from the survey results, this study affirmed that although there are differences in some feedback from managers and teachers on the current state of management and operation of IT applications in teaching. learning English in high school, but most administrators agree that the majority of high schools in Ho Chi Minh City are

aware of the importance and significance of managing IT application activities in teaching and learning English based on the TQM model. So, administrators have made efforts to closely follow the guiding documents and implement the digital transformation model of the Ministry of Education to integrate into international standards.

7. Conclusion

This study shows that applying the TQM model to the management of IT application activities in English teaching at high schools in Ho Chi Minh City, Vietnam, has initially achieved certain results. These findings show that implementing the three stages of TQM in the management process needs to combine the implementation of the PDCA cycle for each stage. At the same time, use SWOT to analyze specific conditions and contexts, thereby selecting priority activities to bring about the best results. Overall, the article has solved the problem of researching and exploring the current status of managing IT application activities in English teaching at high schools in Ho Chi Minh City, Vietnam according to the TQM approach. Currently, this research focuses on the perspectives and opinions of administrators and teachers at high schools in Ho Chi Minh City. Therefore, some results may not accurately reflect the management of IT application activities in English teaching in other localities. Shortly, the authors will conduct further research, with the participation of relevant parties (administrators, teachers, students, parents, and related partners) and expand the research space so that research results can be applied more widely in practice to obtain more convincing results and meet the trend of international integration.

8. Discussion and recommendation

From the survey of the current situation, the authors have the following general statements about strengths and limitations.

Strengths

Over the years, high schools have actively implemented management of IT application activities in teaching English to the TQM approach. Initially, there have been positive changes shown in the following:

- Input phase: Actively planning a strategic plan in line with the school's educational plan in each school year; Organizing and developing teaching plans of specialized groups according to each lesson topic; Training teachers and managers with standard and above-standard IT skills and major English; Focusing on organizing classes; Regularly checking facilities, function rooms, and equipment, making plans to buy new equipment, or maintain, upgrade, ensure eligibility right from the beginning of the school year.

- Processing phase: The principal directs the inspection and evaluation of the management of IT application activities in teaching English based on the implemented plan and inspects, supervises, and corrects management innovation activities according to the plan for each semester and school year; Implement 4 management activities rather effectively: Manage IT application activities in teaching preparation; Manage IT application activities to build learning materials; Manage IT application activities to test and evaluate students' learning results; Manage IT application activities to build an interactive learning environment.

- Output phase: Implement continuous improvement of management according to the PDCA cycle; Student's academic performance and conduct have improved over each semester and school year. Building a quality culture step by step; Collecting feedback and ongoing improvement.

Limitations

Besides the positive changes, the results of surveys, interviews, and research on educational products of schools also show that management of IT application activities in teaching English according to the TQM approach at high schools in Ho Chi Minh City still has the following limitations:

- Input phase: Some schools (Principals) are still confused when making strategic plans by analyzing SWOT; The structure of the teaching staff is not synchronized; Students lack a sense of self-discipline and active and creative learning; Limited funding for investment in technical infrastructure.

- Process phase: Managers who are Principals, Vice Principals, and professional team leaders have not coordinated to build an IT application management system for teaching English in 4 management activities more clearly: preparing to teach, developing learning materials, assessing student learning outcomes, building a detailed interactive learning environment; A part of teachers still feels "under pressure to achieve", the school has not created "an atmosphere of emulation, positivity, self-discipline to work and study for school members"; Difficulty in forming cultural standards, values, beliefs and behaviors that all members share and cooperate to comply with work quality requirements; A system of SPC process control tools combined with SQC quality control tools has not yet been established to process data quickly and effectively to improve quality in the management of teaching process.

- Output phase: The quality of knowledge is still low compared to the requirements of social-economic development and international standard integration; There are limitations in building and developing a systematic, long-term, and continuous quality cultural environment.

In the urgent trend of digital transformation of education for international integration, it is necessary to study the situation and find solutions for management IT application activities in teaching English to improve the quality of teaching and learning English in educational institutions. From the findings, the authors had a scientific basis to propose 6 solutions to improve the efficiency and quality of the management of application activities IT in teaching English according to the TQM approach at high schools in Ho Chi Minh City as follows: First, raising awareness of managers, teachers, and employees about the need to manage IT application activities in teaching English; Second, making a strategic plan to manage IT application activities in teaching English; Third, building a quality management system for IT application activities in teaching English; Fourth, organizing the implementation of the quality management system of IT application activities in teaching English; Fifth, use SPC (Statistical Process Control) and SQC (Statistical Quality Control) tools to control the process effectively and have a basis for implementing continuous improvement; Sixth, build a quality and sustainable cultural environment to organize and manage IT application activities in English teaching.

It should be noted that these solutions need to be implemented with mutual support and depending on local, national, or school realities. In this way, the management of IT application activities in English teaching at schools will be improved, gradually improving the quality of English subjects to meet integration standards with regional and international countries.

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10. The Author

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