How Your Teaching Strategy Affects Your Students' Learning Outcomes; Reflections on Technical Report Writing Course at Gulf University

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Abstract

The current study aimed to investigate how the teaching strategy affects the Gulf University students' Learning outcomes related to Technical Report Writing Course (ENG 119). Technical Report Writing is a 3 credits hours university-required course that aims at presenting a comprehensive overview of the essential elements of effective technical report writing and helping undergraduate students to develop the practical skills required to write successfully. The study used a quasi-experimental research approach with one group post-assessment. The sample of the study was composed of 79 male and female students who registered for (ENG 119) during the Spring Semester of the academic year 2022/2023. Data analysis revealed that the students achieved the course-intended learning outcomes with a high rate of (83.85%), the results also revealed that students achieved a level of mastery in the course by 79.87%, which exceeded the proposed /estimated value of mastery level of (75%) is statistically significant at the level of significance .05 when compared to a hypothetical level of mastery (75%). One-sample t-test results showed that the utilized teaching strategy significantly affects the Gulf University student's achievement in Technical Report Writing Course (ENG119) and lead to a mean of achievement of more than 75, i.e. GU students scored in Technical Report Writing topped the estimated mean of 75 (M = 79.87, SD = 16.41) than found in the population as a whole, t (78) = 2.640, *p* = .010. While the results of the data analysis did not reveal any statistically significant differences between the average male and female students, though the mean of the female group slightly outweighed the mean of the male group (female average = 80.57, Std. Deviation = 14.89), from the male group (Mean = 79.32, Std. Deviation = 18.34), t (77) = .738 not significant at *p* (.01). Based on these

results the study recommends using blended learning in teaching English for Adamic Purposes and it is recommended that Gulf University train the faculty and students on how to make use of blended learning before the implementation.

Keywords

Gulf University, Unit of General Studies, Teaching English for Academic Purposes, Active Learning, Blended Learning and Learning Outcomes

1. Introduction

The activities of the present study took place at the Gulf University (Unit of General Studies) Gulf University is a private higher education institution in Kingdom of Bahrain. Gulf University has been founded based on a strong vision to ensure that it will offer high-quality education and provide graduates with strong intellectual and social foundations, thus helping our graduates to live as full contributors and compassionate members of a global society. Gulf University aims to establish itself as a distinguished higher education provider that will appeal to international, Bahraini, and GCC students who prefer to be educated in a cultural environment, which is acceptable to parents and students alike.

The official registration of GU with the Ministry of Education for its scheduled academic programs was effective from September 21st, 2002; based on His Highness's prime minister's cabinet decree number 1649-03 issued on the 2nd of September 2001.

The Unit of General Studies affiliated recently to the Teaching Excellence & Technology Centre (TETC), was established in the academic year 2016/2017 by the University Council. Its major aim was to support the previously established academic programs. Courses taught in this department are Arabic and English language, Human rights, Sports & Activities, Islamic culture, and the History of Bahrain. In alignment with Gulf University's vision and core values, the unit suggested the need of introducing new courses that aim at the development of competencies and skills related to the requirements of the labour market These courses include Sustainability, Innovation, and Entrepreneurship. The unit's main goal is not only to support academic programs but also to equip students with 21st-century skills and attributes.

The Unit of General Studies administrated teaching 5 English Language University-required courses: English Language courses (015, 016, 118, 119, 120): Different levels of the five courses are designed to develop the learners' basic English language skills to enable them to communicate effectively. Address communication in academic and daily life, study, and the work environment. Advanced courses focus on research techniques and referencing. It covers a variety of genres. It enhances the academic skills of the students. In addition, it assists the

students in critical thinking, reinforces concepts presented in academia, and develops professional terminologies.

2. Review of the Related Literature

The term EAP was first used in 1974 when it was a minor branch of English Language Teaching (ELT). It has grown enormously in the years since, mainly due to the internationalization of higher education and the increasing use of English as the language of academic knowledge exchange. EAP has had its professional body since 1972, originally called SELMOUS (Special English Language Materials for Overseas University Students), which changed its name in 1989 and is now known as BALEAP (The British Association of Lecturers in English for Academic Purposes), which supports the professional development of English for Academic Purposes. EAP has its own professional journal, the Journal of English for Academic Purposes (JEAP), first published in 2002.

The growing trend of internationalization at Canadian institutions of higher education has led to an increased need to support plurilingual students using English as an additional language (EAL). This support, often embedded in English for academic purposes (EAP) programs, is offered in a wide range of contexts across Canadian institutions of higher education. However, relatively little is known about this sector or those who work within it. In this article, we seek to delineate the Canadian EAP landscape by providing findings from the first phase of a mixed methods investigation into EAP programs and practitioners across Canada. Corcoran, Williams, and Johnston (2022) surveyed EAP programs and practitioners across three types of Canadian institutions involved in the provision of EAP support (n = 481). Findings point to a diversity of program models and practitioner profiles across Canadian regions and institutions, as well as significant differences in practitioners' professional satisfaction based on role and institution type. Further findings point to substantial concern among EAP practitioners regarding job security, collaboration with other institutional stakeholders, and professional development opportunities. Adopting a critical pragmatic lens, we discuss findings, raising questions for consideration for EAP administrators, instructors, and post-secondary institutional policymakers, and conclude with a call for greater research into Canadian EAP programs and practitioners.

To help ESP college instructors improve the English curriculum taught at polytechnic institutes, colleges, and universities, Al-Jarf (2022) proposed a model for designing English for Polytechnic Purposes (EPP) courses for undergraduate students majoring in mechanical engineering, chemistry, technology, economics, textile industry, and other applied sciences. It aims to show instructors the following: how to identify students' needs; how to assess students' proficiency level in English; how to define the EPP learning outcomes (course objectives); how to identify the language skills and language elements that should be taught to a particular group of students; how to select technical terms and topics related to the students' area of specialization; how to select the course content and material to

be used; how to integrate the content and skills while teaching, i.e., how to teach content and listening skills, content and speaking skills, content and reading skills, content and writing skills, content and technical terms, content and grammar, and how to integrate current global events in the course; how to develop students' prior knowledge in their area of specialization; teaching students how to search for information in online resources; the types of technologies that can be integrated in EPP instruction; the kind of assignments, practice and application activities to give to the students.

Globalization in the banking industry has demonstrated one of the most significant necessities of today, English for Specific Purposes (ESP)-based curricula. ESP drives contemporary organizations to communicate effectively with customers, suppliers, and competitors across geographical boundaries. Therefore, it is imperative to examine learners' needs and difficulties while using ESP in practice to achieve this goal effectively. Alshayban (2022) from Saudi Arabia examined the skills of bankers learning or using English as a Second Language (ESL) to assist them in meeting their job needs in the banking sector. An online survey (n = 43) and interview (n = 39) was employed to collect data to understand the aspects vital to the teaching of ESP among banking professionals from Saudi Arabia. About 60% of the sample admitted they needed to improve their English-speaking skills, with more than 80% citing that it is essential for their profession. The interviewees also highlighted English writing skills as being more critical to their needs and desired to enhance their speaking and writing skills. The interviewees further revealed that poor English, difficulty in understanding accents, and insufficient knowledge of banking terminology hindered their communication with customers. The study suggested pedagogical implications and recommendations to support employers in the banking sector, ESP teachers, and curricula designers in improving the current ESP design and delivery in Saudi Arabia.

College English teachers' pedagogical content knowledge (PCK) is subject to change in the transition from the teaching of General English (GE) to that of English for Academic Purposes (EAP). Underpinned by Grossman's four-dimensional model of PCK, this study aims to investigate the trajectory of PCK development among college English teachers through the transition from GE to EAP in the Chinese context. Han, Zhao, Menghan, and Zhang (2021) adopted a qualitative case study approach, multiple sources of data about three teachers were collected through semi-structured interviews, class observations, and teaching materials. Results show that teachers' conceptions of the purpose of teaching EAP, as opposed to GE, are fundamental to PCK development. The development of different PCK components was mainly attributed to a variety of informal learning activities, which are insufficient for well-balanced development. Additionally, the development of PCK was hindered by teachers' limited content knowledge. The findings have significant implications for effective college English teacher development in the transition from GE teaching to EAP teaching.

English for Academic Purposes (EAP) has become an increasingly prominent sector of the English language teaching profession in British Columbia, providing English language preparation for post-secondary education across a range of disciplines. Walsh Marr (2021) explored both promising initiatives and tensions in the enactment of critical pedagogy in EAP, not least of which is the precarity of many instructors in the field. Recognizing the contributions of EAP and moving the field from the margins of the academy would make for better opportunities to realize the full potential of international students and international education through critical pedagogy.

Rao (2020) reported in a research paper presents Academic Language Proficiency and how to use general and content-specific vocabulary, and specialized or complex grammatical structures all to acquire new knowledge and skills. English for Academic Purposes (EAP) has emerged out of the broader field of English for Specific Purposes (ESP). EAP teachers often attempt to choose the best way to assist students with Academic English. EAP educators show wholeheartedly their expertise in classroom instruction and their responsiveness to students' needs through educational program arranging and materials improvement.

Blended Learning for Teaching English for Adamic Purposes

Over the last thirty to forty years, as technology and supplementary broadcast networks have advanced, an increasing number of teachers have entered the classroom with new perspectives, such as providing students with resources and an environment that adheres to the blended teaching style. Learning can take place whenever and wherever it is desired with a blended teaching approach. Alsamadani (2023) reported on a quasi-experimental study that investigated the effects of the dictogloss strategy on Saudi EFL writing skills and attitudes toward learning English. It also measures students' attitudes towards learning English using dictogloss activities. The researcher used the dictogloss strategy when teaching the experimental group for five weeks, whereas the students in the control group were taught using the traditional way. Students were matched according to their writing proficiency, instructed by the same teacher (the researcher), and were similar in age. After five weeks of instruction, both groups completed another writing post-test and the attitude questionnaire. Measures of the means, standard deviations, and ANCOVA were used to determine the differences between the two groups. The results revealed a significant statistical difference in students' writing skills, including their engagement and motivation in the class and their language output, favoring the experimental group. The study concludes with recommendations for training EFL teachers on using dictogloss when teaching writing and that dictogloss texts should be topic-based materials to integrate different language skills collaboratively.

Yang, Huang, and Huang (2022) investigated whether the blended teaching strategies and materials or the traditional teaching method in the Business Eng-

lish class increase students' learning satisfaction and academic achievement. The participants of the study are 56 undergraduate students majoring in Applied Foreign Languages in central Taiwan. The four-point Likert scale questionnaire was distributed after students took the course. Results revealed that students considered blended teaching an effective teaching strategy that increased their learning motivation with additional instructional activities. In addition, findings demonstrated that both handwritten exams (associated with traditional teaching methods) and interactive answering Apps (associated with blended teaching methods) work effectively based on different teaching methods. The study suggested that the majority of students have a positive attitude toward blended learning in the ESP program of Business English and that their academic performance has improved.

Blended learning utilizes the affordances of information and communication technology to integrate online learning with face-to-face teaching. It facilitates meeting students' disciplinary learning needs and helps them achieve the intended learning outcomes so that they can advance in their professional studies. Zhang (2021) reported on a study focused on developing and evaluating a blended course implemented in the context of English for Specific Purposes (ESP) from the perspective of accountability and development, to assess the effectiveness of the course from three aspects: the satisfaction of students' learning requirements, the achievement of their learning outcomes, and the ongoing refinement of the course. Results indicated that, firstly, students are satisfied with the course design and its implementation; secondly, the course modification should focus on adding academic presentations, teaching in English with a trans-semiotician approach, and consolidating the disciplinary community, which in turn activates students' knowledge-sharing and critical thinking. The study offers a systematic framework to evaluate the ESP blended course, which also has implications for evaluating blended courses in other language curricula.

Information and Communication Technology—ICT and blended learning have recently been recognized as being beneficial to English learners who live in a non-English-speaking country due to the formation of a virtual native-like setting based on online learning. Wang (2021) assessed whether teaching English conversation in both online and offline settings can improve learners' communicative performance as well as feedback from both instructors and learners. A pre-experimental method was used to investigate the effect of blended learning on the English speaking and listening performance of 136 participants, who were divided into 3 groups and invited to join an 18-week English conversation course based on both face-to-face teaching and online learning. Results indicated that blended learning had an overall positive effect on the student's English conversation performance. The students themselves had a positive attitude toward the blended course arrangement and agreed that blended learning supported their learning of English conversation, while the instructors also indicated that the online course had helped the students' learning of English con-

versation to some extent. However, more supportive policies are required for a more comprehensive implementation of blended learning. All in all, Hitutor was employed in this study to design a blended English conversation course and demonstrate its positive effect. Non-English native speakers can overcome the restriction of an EFL learning environment with both traditional lectures and ICT.

Alrouji (2020) t examined the effectiveness of blended learning in improving Saudi EFL students' English paragraph writing at Shaqra University. The sample of the study consists of 70 EFL students at Shaqra University. The experiment was conducted for six weeks (2018). A pre-test and post-paragraph writing test was used to measure the effectiveness of blended learning in enhancing paragraph writing skills. Results showed that there were significant differences in the mean scores of the control group (traditional teaching mode) and the experimental group (blended learning) in favour of the experimental group. This proved the effectiveness of the blended learning approach in developing Saudi students' competence in paragraph writing.

Blended learning has recently been considered a hot topic in education, especially for teachers and students to employ for the enhancement of the English language throughout the world. Hashemi and Si Na (2020) reviewed the related literature on the blended learning effects in teaching and learning the English language. Various related literature has been reviewed to find out the effects of blended learning on the four integrated skills of the English language such as reading, writing, speaking, and listening skills. The outcome of the reviewed literature present that there are effects of using blended learning in teaching and learning the English language. Blended learning affects each of the integrated skill of the English language positively and it is suggested that using blended learning as one of the 21st-century skills need to be taken into consideration for the teaching and learning of the English language in the future.

The main goal of the present study is to investigate how strategy/ strategies used for teaching Technical Report Writing Course at Gulf University affect student's learning outcomes.

3. The Study

3.1. Research Questions

The study sought to answer the following questions:

1) What are the objectives and Intended Learning Outcomes of the Gulf University's Technical Report Writing Course?

2) What is the strategy used to teach the course during Spring 2022/2023 like?

3) How does the teaching strategy affect the student's learning outcomes?

4) How does the teaching strategy affect the students' achievement in Technical Report Writing Course?

5) Are there any differences in students' achievement in the course related to student gender (Male-Female)?

3.2. Methodology

The present study adopted a quasi-experimental research design for testing the effect of the proposed teaching strategy (activity-based blended learning) on Gulf University students' Technical Report writing Course Learning Outcomes. A one-group post-test-only design was implemented (an independent variable is manipulated) and then a dependent variable is measured once after the treatment is implemented.

3.3. Population and Sample

The population for this study was made up of all Gulf University students who were eligible to study the Technical Report Writing university required course. The sample for this research was made up of 79 GU students from different departments who registered for ENG 119 during the spring semester of the academic year 2022/2023. Table 1 presents the sample descriptive statistics.

Seventy-ninety-students participated in the study during the spring semester of the academic year 2022/2023. Futurity four students (55.70%) are males and 35 students are females. Thus, the total sample of (79) students who participle in the study completed all the activities of the study and the study instruments used for data collection.

Technical Report Writing Course (ENG 119) represents the topic limitation of the present study. Technical Report Writing Course (ENG 119) is a 3-credit hour that aims to teach students how to develop technical writing about subjects that require technical explanations, analyses, data presentation, and information understood by technical readers.

It is worth meeting those technical reports are tools for professionals to communicate their ideas. This university-required course introduces technical report writing and teaches the techniques that students from different disciplines need to construct well-written academic as well as professional reports.

Each week, the class looks at a key topic of a technical report and the skills needed to write it. They will cover areas such as referencing and citations; presenting equations; diagrams and data; and using language and tenses correctly.

The course requires students from different fields to practice technical report writing in their field of study and share their technical reports, share their products with their class and instructor to give hands-on advice. Table 2 presents the topics of the course distributed over the weeks of the semester.

Table 1. Study sample disruptive statistics.

Gender	N	%
Male	44	55.70
Female	35	44.30
Total	79	100%

Table 2. Technical report writing course structure and teaching strategy.

Week	Contact Hours	ILOs	Unit/Module/Topic Title	Teaching and Learning Methods	Assessment Methods
1	3	LO1 K-TU	Introduction to Technical Report Writing Parts of Formal Texts	Lecture Class discussion	Quiz Mid-Term Exam
2	3	LO1 K-TU LO2 K-PA	Essay & Paragraph Writing Structure of Short & Long Essays Formal & informal Language structures	Lecture Class discussion	Assignment 1 Mid-term Exam,
3	3	LO3 S-PS	Finding suitable sources for Research/Report Writing	Lecture Online samples Class discussions Exercises	Final Report
4	3	LO4 S-C	Developing Critical Approaches for Research Report Writing	Lecture Online samples Class discussions Exercises	Mid Term Exam
5	3	LO8: C-R	Plagiarism & Research Ethics	Lecture Online samples Class discussions Exercises	Final Report Participation
6	3	LO7: C-A LO8: C-R	Types of Referencing Writing References for Research/Report	Lecture Class discussion	Participation
7	3		Review	Class discussion	
8	3	LO1 K-TU LO2 K-PA LO4 S-C	Mid Term Exam	Individual work	
9	3	LO3 S-PS	Identifying a Research Problem Writing Abstract & Introduction	Lecture Online sample Class discussions Exercises	Final Report
10	3	LO2 K-PA	Writing Literature Review	Lecture Exercises Discussion	Presentation, Final Report
11	3	LO3: S-PS	Writing Discussion, Conclusion & Recommendations	Online samples Individual activities	Presentation, Final Report
12	3	LO5 S-C	Interpretation of visual aids (2)	Online samples Individual activities	Assignment 2
13	3	LO6 S-C LO8:C-C	Research Presentation	Lecture Exercises Discussion	Presentation
14	3	LO3 S-PS LO5 S-C LO7 C-A LO8 C-R	Review	Class discussions Exercises	Final Report
15	3	LO3 S-PS LO5 S-C LO7 C-A LO8 C-R	Final exam	Independent learning	Final Report

English for Academic Purposes (EAP) involves teaching students to use language appropriately for study and research. It is a branch of ESP (English for Specific Purposes) that has expanded together with the growing number of international students undertaking higher education in English. English for Academic Purposes is the English that is needed to study or conduct research using that language. It is most commonly associated with preparation for undergraduate study, via short (4 - 12 weeks) pre-sessional courses, i.e., ones that take place before the study begins, though many other EAP contexts exist, including courses to prepare students for post-graduate study, longer courses such as foundation year programs, and courses which take place at the same time as the study, called in-sessional courses. Table 2 shows the course structure.

3.4. Procedures

The activities of the present study were conducted in the following sequential steps:

1) The students were registered for Technical Report Writing Course at the beginning of the Fall semester of 2022/2023.

2) First, registration for ENG119 was done with many students per section, the IT& departments works by allocating four sections of students on GU Moodle LMS. GU Moodle platform is used for developing the online course components including online course materials, assignments, and keeping an eye on students' progress tools.

3) To help access Moodle, the IT department along with the registration department works on providing both students and faculties (full-time/ part-time) with their email addresses.

4) To help introduce the students to the Moodle Platform, regular induction sessions are held by the IT department at the beginning of semesters.

5) Course navigation with course material and learning interactions between the students, the material, and the instructor are encouraged and facilitated by activating using suitable communication online tools.

6) The semester is divided into 15 weeks, accordingly, classes run smoothly, and the assessment scheme agreed on by HODs is used to conduct assessments on Moodle.

7) assessments are either summative/informative or both.

8) Technical Report Writing (ENGL 119) has two writing assignments that assess the gradual progress of students' writing skills.

9) Assignment one is conducted on week (4), feedback is given on week (5) while assignment two is conducted on week (12).

10) One quiz which is conducted on week (6) before the midterm, is assessing students' understanding of all theoretical discussions held about the basics and features of academic writing.

11) The midterm exam (week (8) is assessing and ensuring the achievement of CLOs. To ensure the validity and reliability of the Midterm, it must go through 3

moderation stages. Which are,

a) the internal pre-assessment moderation;

b) external moderation;

c) and post-moderation assessment.

12) The feedback is given to the students during class discussions.

13) Final examination.

14) The teacher checked the final versions of the group work, then showed the students the final version of the text, providing them with constructive feedback and tips for enhancing their work when conducted next time.

15) Throughout this process, the observer teacher took notes of students' interactions, reactions to instructions, and any other actions they took while doing tasks.

4. Study Results

Results related to question 1: What are the objectives and Intended Learning Outcomes of the Technical Report Writing Course?

Technical Report Writing (ENGL 119) is a 3 credits hours university-required course taught for all Gulf University undergraduate academic programs. The course focuses on research techniques and referencing. It covers a variety of genres such as written reports, business letters, and proposals, and provides students with various tools on how to write them effectively and efficiently. It enables students to get exposed to technical report writing skills through academic writing strategies and steps.

The course aims to 1) develop various techniques and principles of English formal report writing relevant to a professional career; 2) improve the writing of English formal essays, reports, and research articles with proper citation and referencing techniques. The course has been aligned with the programs' specifications and the relevant bodies of the program's accreditation. The revised and approved version of the extended coursed specification stated the course ILOs as shown in Table 3.

Results related to question 2: What is the proposed strategy used for teaching the course during Spring 2022/2023 like?

The utilized teaching strategy is a blended learning one that integrates technology and digital media with traditional instructor-led classroom activities, giving students more flexibility to customize their learning experiences. Figure 1 shows the blended learning strategy used for teaching the Technical Report Writing Course during the Fall semester of 2022/2023.

In the present study besides the commonplace Face-to-Face presentation, part of the teaching materials was posted through GU Moodle LMS (learning activities and assignments). Figure 1 presents the components of the utilized teaching strategy.

The utilized teaching strategy is blended learning which incorporates direct instruction, indirect instruction, collaborative teaching, and individualized on-

line learning. As shown in Figure 1, the utilized blended learning strategy includes 1) Traditional Teaching Learning Process which is composed of Face-to-Face Classroom Teaching, Non-Formal Interactions with the students, and Formal Interactions with the Course Instructor.

2) Supported Teaching Learning Process which is composed of interactions with students Through MS TEAMS, communicate with students through WhatsApp, and online learning through GU Moodle LMS.

a) Face to Face teaching: Face-to-face learning is an instructional method where course content and learning material are taught in person to a group of students. The face-to-face session is a live meeting among participants, instructors, and facilitators. Face-to-face interaction can help to break down barriers and provide real cross-cultural experiences and networking opportunities, thereby assisting in sustaining relationships and encouraging the sharing of knowledge. Classes, seminars, workshops, and conferences, in which all participants meet in the same facility, are examples of face-to-face events.

Table 3. English Report Writing: Intended Learning Outcomes, teaching, learning, and assessment methods.

| After successful completion of the course, a student will be able to:		
Intended Learning Outcomes	Teaching and Learning Methods	Assessment Methods
LO1: K-TU — Demonstrate generalized knowledge and understanding of various types of reports, components of formal texts, and reports relevant to various disciplines.	Lecture Class discussion	Quiz Mid-Term Exam
LO2: K-PA — Compose technical reports with coherence and cohesion adhering to academic integrity relevant to any specialization.	Lecture Class discussion	Assignment 1 Mid-Term Exam Final Report
LO3: S-PS — Identify a research problem, draw conclusions, and suggest solutions for any project or research relevant to specialized fields.	Lecture Individual and group activities	Final Report
LO4: S-C — Demonstrate effective reading skills to collect input relevant to different sections of the report for academic and professional purposes.	Lecture Online samples Class discussions Exercises	Mid-Term Exam
LO5: S-C — Demonstrate effective written communication skills to prepare reports using formal text, images, graphs, and charts relevant to various specializations.	Lecture Online samples Class discussions Exercises	Assignment 2, Final Report
LO6: S-C — Display effective communication skills in presenting reports and interacting in question-answer sessions involving internal and external people.	Lecture Exercises Discussion	Presentation
LO7: C-A — Employ independent and life-long learning competencies to enhance the quality of project reports about any discipline.	Online samples Individual activities	Final Report
LO8: C-R — Demonstrate ethical responsibility and integrity to present true results of research and project work derived from the study without any distortion.	Lecture Discussions Presentations	Participation, Final Report
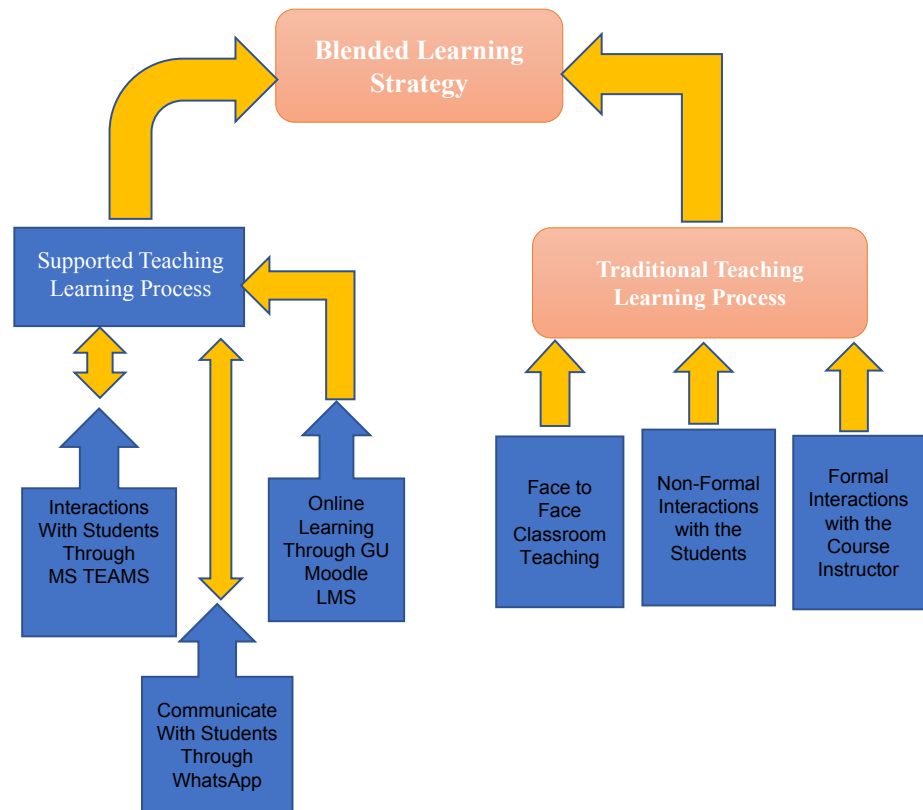
Figure 1. The components of the utilized teaching strategy.

b) Non-Formal Interactions with the students: Non-formal learning takes place outside formal learning environments but within some kind of organizational framework. It arises from the learner's conscious decision to master a particular activity, skill, or area of knowledge and is thus the result of intentional effort. Non-formal learning typically takes place in community settings: swimming classes for small children, sports clubs of various kinds for all ages, reading groups, debating societies, amateur choirs, orchestras, and so on.

c) Formal Interactions with the course instructor: The main purpose of formal communication is to give orders, convey instructions and fulfil the goals of the organization. It is a traditional yet effective mode of communication that has a top-down approach, that is, from senior leaders to the bottom-most level in an organization.

d) Interactions with students through MS TEAMS: Microsoft Teams makes it easy for educators to set up virtual classrooms, keep assignments organized, and collaborate on Word, Excel, and PowerPoint files in real-time. Microsoft Teams is a great way to increase interaction among students in your classes. It provides such functions as instant messaging, file sharing, and video chat, and provides an easy way to create interaction areas for groups.

e) Communicate with Students through WhatsApp: The use of WhatsApp in education is already making waves in the sector. In the coming years, WhatsApp in education will help democratize learning and empower educators and educa-

tional institutions to disseminate knowledge to more learners than would ever be possible with the traditional, in-person education system.

f) E-Learning through GU Moodle LMS: E-learning is an emerging field as a promising instructional medium as well as a ripe arena in which to conduct research on its impact on teaching and learning activities. The Online/ E-learning component of the course took place through Moodle administrated by the E-Learning Unit at Gulf University. It offers an electronic learning median that supplements the regular classes, as well as provides the students with a variety of skills in different subject areas. This leads to the enhancement of the student's abilities and thinking skills. Moreover, it fulfils the student's learning needs and continuously supplements them with the appropriate learning resources, and allows for more student-teacher interaction regardless of time and place constraints.

Results related to question 3: How does the teaching strategy affect the students, Intended learning outcomes achievement?

To assess the impact of the Technical Report Writing course on Gulf University students' learning outcomes as stated in question 1, the study assesses the student's achievement in the course learning outcomes presented in Table 1. Table 2 presented the achievement of the Technical Report Writing Course Intended Learning Outcomes (ILOs).

From Table 4 one can conclude the following:

- All the (ILOs) of the course were satisfied with a ratio above 55%.

- Two of the intended learning outcomes were satisfied with a ratio of 95.00%. They are:

Table 4. The achievement of the Course Intended Learning Outcomes (ILOs).

ILO's	Intended Learning Outcomes Description	ILO's Achievement %
LO1-K-TU	Demonstrate generalized knowledge and understanding of various types of reports, components of formal texts, and reports relevant to various disciplines.	95.00%
Lo2-K-PA	Compose technical reports with coherence and cohesion adhering to academic integrity relevant to any specialization.	59.40%
LO3-S-PS	Identify a research problem, draw conclusions, and suggest solutions for any project or research relevant to specialized fields.	95.00%
LO4-S-C	Demonstrate effective reading skills to collect input relevant to different sections of the report for academic and professional purposes.	85.00%
LO5-S-C	Demonstrate effective written communication skills to prepare reports using formal text, images, graphs, and charts relevant to various specializations.	72.50%
LO6-S-C	Display effective communication skills in presenting reports and interacting in question-answer sessions involving internal and external people.	78.80%
LO7-C-A	Employ independent and life-long learning competencies to enhance the quality of project reports about any discipline.	93.80%
LO8-C-R	Demonstrate ethical responsibility and integrity to present true results of research and project work derived from the study without any distortion.	91.30%
	Overall Technical Report Writing ILO's Achievement %.	83.85 %

- The intended learning outcome (LO1-K-TU) stated demonstrating generalized knowledge, and understanding of various types of reports, components of formal texts, and reports relevant to various disciplines scored (95%), and the intended learning outcome (LO3-S-PS) which is stated as identifying a research problem, concluding, and suggesting solutions for any project or research relevant to specialized fields scored the highest percentage (95%).

- The learning outcome (LO7-C-A) states: Employ independent and life-long learning competencies to enhance the quality of project reports about any discipline come in the second stage and scored (93.80%).

- The intended learning outcome (LO2-K-PA) which states: compose technical reports with coherence and cohesion adhering to academic integrity relevant to any specialization scored the lowest ratio (59.40%).

- The Overall Average of the Technical Report Writing ILOs achievement is 83.85 %.

Figure 2 shows the Technical Report Writing Course ILOs achievement histogram.

Results related to question 4 stating: How does the teaching strategy affect the student's achievement in the Technical Report Writing Course?

To assess the impact of the utilized teaching strategy on Gulf University student's achievement in the Technical Report Writing Course, the students' final grades are collected and analysed by using SPSS software. Table 5 shows the deceptive group statistics. Table 3 shows one-sample statistics related to GU students' achievement in Technical Report Writing Course.

To test the effect of the utilized teaching strategy on the student's achievement in Technical Report Writing, the study compared the achievement overall mean with a proposed mean of (75% Mastery level). Table 6 shows one Sample t-Test result with a test value of 75.

From Table 5 and Table 6; GU students scored in Technical Report Writing acceded the estimated mean of 75 (M = 79.87, SD = 16.41) than found in the population as a whole, t (78) = 2.640, p = .010.

This result proved that the utilized teaching strategy positively affected the Gulf University student in the Technical Report Writing Course.

Figure 3 shows that the GU students marks distribution in the Technical Report Writing, which shows a positive skew that indicates the tail is on the right side of the distribution, which extends towards more positive higher scores in the course. This high achievement in the course is due to the utilized teaching strategy.

Results related to question 5 stating: Are there any differences in students' achievement in the course related to student gender (Male-Female)?

To assess differences in GU student's achievement in the Technical Report Writing Course related to student gender (Male-Female), the students' final grades are collected and analysed by using SPSS software. Table 7 shows the descriptive group statistics.

Table 7 shows that; the Female scored a better mean achievement compared to the Male i.e. (Female Mean = 80.57, Std. Deviation = 18.34; Male Mean = 79.87, Std. Deviation = 14.89). i.e., Females scored higher than Males in Technical Report Writing.

To test if there are statically significant differences between female and male means, an independent t-test was conducted. Table 8 presents the Independent Samples Test according to student gender results.
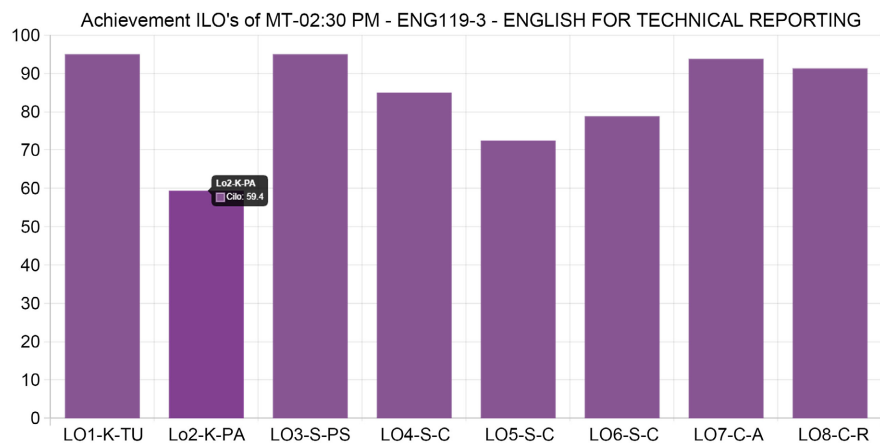

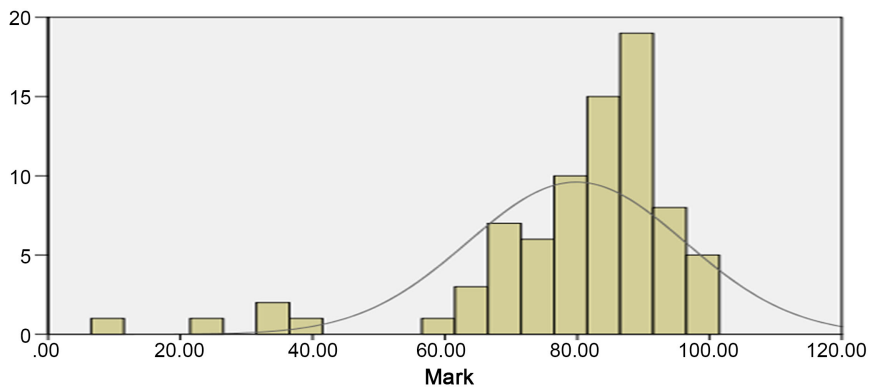**Figure 2.** Technical report writing ILO achievement histogram.

Figure 3. Technical report marks distribution.

Table 5. Technical report writing course one-sample statistics.

	N	Mean	Std. Deviation	Std. Error Mean
Mark	79	79.87	16.41	1.85

Table 6. Technical Report Writing Course One-Sample Test with a test value = 75.

			Test Value = 75			
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Mark	2.640	78	.010	4.87342	1.1985	8.5484

Table 7. Group deceptive statistics.

Gender	N	Mean	Std. Deviation	Std. Error Mean
Male	44	79.32	14.89	2.24404
Female	35	80.57	18.34	3.10036

Table 8. The Independent Samples Test according to student gender results.

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.051	.822	−.335	77	.738	−1.25325	3.73738	−8.69531	6.18882
Equal variances not assumed			−.327	64.87	.744	−1.25325	3.82726	−8.89710	6.39060

From Table 8 above, Levene's Test for Equality of Variances shows no statistical differences between the Males and Females groups who are studying the Technical Report Writing Course. This nonsignificant means that the two groups have homogeneity of variance between the dependent or outcome variable represented in the achievement so one can run an independent t-test to compare the two groups' means of achievement.

Although the females group's mean exceeds the males group's mean, the Independent Samples Test results proved no statistical differences in students' achievement means related to student gender (male, female).

5. Discussion

The main objective of the present study is to investigate how the used teaching strategy affects the Gulf University student's achievement in Technical Report Writing (ENG119) as well as the Course Learning Outcomes. To satisfy this aim, an activity-based blended learning strategy was adopted. The utilized teaching strategy makes use of the face-to-face class interactions combined with e-learning activities through the Gulf University Moodle LMS and Microsoft which make available and accessible for the students in addition to informal communications between the course instructor and the students through WhatsApp.

A sample of 79 male and female students (44 males and 35 females) driven from the different Gulf University departments who are studying for a bachelor's degree and who are enrolled in the Technical Report Writing Course-one of the university's requirements participated in the study. The study was carried out during the Spring semester of the academic year 2022/2023, where a quasi-experimental research methodology based on one group post-measurement was used. The needed data was collected through the results of the course assessment items and exams (mid-term and final), in addition to the results-driven from Moodle LMS on assessing and measuring the degree of achieving the course Intended Learning Outcomes (ILCs).

Data analysis results revealed that the students achieved the course-intended learning outcomes with a high rate of (83.85%), the results also revealed that students achieved a level of mastery in the course by 79.87%, which exceed the proposed /estimated value of mastery level of (75%) is statistically significant at the level of significance .05 when compared to a hypothetical level of mastery (75%). One-sample t-test results showed that the utilized teaching strategy significantly affect the Gulf University achievement in Report Writing Course (ENG119) and lead to a mean of achievement of more than 75, i.e. GU students scored in Technical Report Writing topped the estimated mean of 75 (M = 79.87, SD = 16.41) than found in the population as a whole, t (78) = 2.640, p = .010. While the results of the data analysis did not reveal any statistically significant differences between the average male and female students, though the mean of the females group slightly outweighed the mean of the males group (female average = 80.57, Std. Deviation = 14.89), from the male group (Mean = 79.32, Std. Deviation = 18.34), t (77) = .738 not significant at p (.01).

These results confirm the feasibility of the teaching strategy used for teaching the course which proved its capability in helping the students master the course learning outcomes with a high level of achievement. Two of the intended learning outcomes were satisfied with a ratio of 95.00%. They are (LO1-K-TU) which states demonstrating generalized knowledge and understanding of various types of reports, components of formal texts, and reports relevant to various disciplines, and (LO3-S-PS) which states identifying a research problem, concluding, and suggesting solutions for any project or research relevant to specialized fields scored the highest percentage. The intended learning outcome (LO2-K-PA) which states: compose technical reports with coherence and cohesion adhering to academic integrity relevant to any specialization scored the lowest ratio of (59.40%). This result is justified, as this learning outcome represents a higher level according to Bloom's taxonomy of knowledge, and requires further practice and follow-up.

These results are consistent with the results of many studies such as a (Al-Jarf, 2022) which proposed a model for designing English for Polytechnic Purposes (EPP) courses for undergraduate students majoring in Mechanical Engineering, Chemistry, Technology, Economics, Textile Industry, and other applied sciences. And Alshayban (2022) from Saudi Arabia examined the skills of bankers learning or using English as a Second Language (ESL) to assist them in meeting their job needs in the banking sector and suggested pedagogical implications and recommendations support employers in the banking sector, ESP teachers, and curricula designers for improving the current ESP design and delivery in Saudi Arabia.

Also, supported by Han, Zhao, Menghan, and Zhang (2021) who adopted a qualitative case study approach, multiple sources of data about three teachers were collected through semi-structured interviews, class observations, and teaching materials and found generated significant implications for effective college

English teacher development in the transition from GE teaching to EAP teaching. A notable result was that the used teaching strategy develop the students learning motivation and this result is highly supported by Yang, Huang, and Huang (2022) who investigated whether the blended teaching strategies and materials or the traditional teaching method in the Business English class increase students' learning satisfaction and academic achievement. Their results revealed that students considered blended teaching an effective teaching strategy that increased their learning motivation with additional instructional activities. Also, they found that blended learning leads to both handwritten exams (associated with traditional teaching methods) and interactive answering Apps (associated with blended teaching methods) working effectively based on different teaching methods.

The study results were also supported by Zhang (2021) who developed and evaluated a blended course implemented in the context of English for Specific Purposes (ESP) from the perspective of accountability and development, to assess the effectiveness of the course from three aspects: the satisfaction of students' learning requirements, the achievement of their learning outcomes, and the ongoing improvement of the course. His results revealed that students are satisfied with the course design and its implementation; blended learning in English with a trans-semiotician approach and consolidating the disciplinary community, which in turn activates students' knowledge-sharing and critical thinking. Also, Wang (2021) found that the students had a positive attitude toward the blended course arrangement and agreed that blended learning supported their learning of English conversation. And finally, the results go with Hashemi and Si Na (2020) who reviewed the related literature on the blended learning effects in teaching and learning the English language and found that there are effects of using blended learning in teaching and learning the English language. Blended learning affects each of the integrated skill of the English language positively and it is suggested that using blended learning as one of the 21st-century skills need to be taken into consideration for the teaching and learning of the English language.

6. Reconditions

Based on these results the study recommends the following:

1) Instructors who teach English for Adamic Purposes should make use of multiple types of instructional materials to facilitate the students learning.

2) Teachers advise incorporating technology for their student's reinforcement.

3) The study recommends trying new teaching techniques in the English language for better learning outcomes.

4) Integrating more e-learning material with traditional methods to enhance teaching and learning outcomes.

5) When using blended learning make use of various course assessments.

6) It is recommended that Gulf University train faculty and students on blended learning before the implementation.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

Al-Jarf, R. (2022). Teaching English for Polytechnic Purposes: Guidelines for an Integrated, Communicative Approach. *Online Submission, Journal of English Language Teaching and Applied Linguistics, 4*, 113-124. https://doi.org/10.32996/jeltal.2022.4.2.11

Alrouji, O. O. (2020). The Effectiveness of Blended Learning in Enhancing Saudi Students' Competence in Paragraph Writing. *English Language Teaching, 13*, 72-82. https://doi.org/10.5539/elt.v13n9p72

Alsamadani, H. A. (2023). Doctorless in Saudi EFL Context: Potential Effects on Students' Writing Skill and Attitudes towards Learning English. *Arab World English Journal, 13*, 27-37. https://doi.org/10.24093/awej/vol13no1.2

Alshayban, A. (2022). Teaching English for Specific Purposes (ESP) to Saudi Arabian Banking Employees. *Language Teaching Research Quarterly, 27*, 1-18. https://doi.org/10.32038/ltrq.2022.27.01

Corcoran, J. N., Williams, J., & Johnston, K. P. (2022). English for Academic Purposes in Canada: Results from an Exploratory National Survey. *BC TEAL Journal, 7*, 55-84.

Han, J. Y., Zhao, Y. L., Liu, M. H., & Zhang, J. (2021). The Development of College English Teachers' Pedagogical Content Knowledge (PCK): From General English to English for Academic Purposes. *Asia Pacific Education Review, 22*, 609-621. https://doi.org/10.1007/s12564-021-09689-7

Hashemi, A., & Si Na, K. (2020). The Effects of Using Blended Learning in Teaching and Learning English: A Review of Literature. *Online Submission, The Eurasia Proceedings of Educational & Social Sciences, 18*, 173-179.

Rao, V. C. S. (2020). Academic Language Proficiency: English for Academic Purposes (EAP). *Online Submission, Journal for Research Scholars, and Professionals of English Language Teaching, 4*.

Walsh Marr, J. (2021). The Promise and Precarity of Critical Pedagogy in English for Academic Purposes. *BC TEAL Journal, 6*, 132-141.

Wang, C. Y. (2021). Employing Blended Learning to Enhance Learners' English Conversation: A Preliminary Study of Teaching with Hitutor. *Education and Information Technologies, 26*, 2407-2425. https://doi.org/10.1007/s10639-020-10363-5

Yang, C.-H., Huang, Y. L., & Huang, P. W. (2022). A Comparison of the Learning Efficiency of Business English between the Blended Teaching and Conventional Teaching for College Students. *English Language Teaching, 15*, 44-53. https://doi.org/10.5539/elt.v15n9p44

Zhang, R. (2021). Blended Course Evaluation in the Context of English for Specific Purposes: Accountability and Development. *SAGE Open, 11*. https://doi.org/10.1177/21582440211054502