

A Hybrid Learning Program for Developing some English Language Skills for Physical Therapy Faculty Students

Doaa.M.A.El-Sherbiny

English Lecturer

Delta University for Science and Technology

Abstract

Hybrid learning is a relatively new technology-based teaching approach. Few attempts have been made to apply this approach in medical education. The present paper aims at investigating the effectiveness of the proposed hybrid learning program in developing some English language skills for the students studying at the faculty of Physical Therapy, Delta University for Science and Technology in Egypt. The proposed program integrates English for Specific Purposes (ESP) courses with the hybrid learning approach in the physical therapy field. The study adopted the quasi-experimental design. The control group studied the traditional English course in the traditional face-to-face methods of teaching. The experimental group studied the proposed ESP course using the study hybrid learning program. Statistical results revealed that the mean scores of the experimental group surpassed the mean scores of the control group in terms of the assigned language skills needed for the physical therapy students according to their specialization. Hence, the study reached the conclusion that hybrid learning is more effective than traditional face-to-face teaching in developing the English language skills of the physical therapy students.

Keywords: Hybrid/Blended Learning, English for Specific Purposes (ESP), English for Medical Purposes (EMP), English for Physical Therapy (EPT), English language skills.

برنامج تعلم هجين لتنمية بعض مهارات اللغة الإنجليزية لطلاب كلية العلاج الطبيعي

د/دعاء محمد احمد الشربيني

مدرس بجامعة الدلتا للعلوم والتكنولوجيا

ملخص عربي

التعلم الهجين هو نهج التدريس القائم على التكنولوجيا الجديدة نسبياً ، ولقد بذلت محاولات قليلة لتطبيق هذا النهج في التعليم الطبي. تهدف هذه الورقة إلى دراسة فعالية برنامج التعليم المختلط المقترح في تطوير بعض مهارات اللغة الإنجليزية للطلاب الذين يدرسون في كلية العلاج الطبيعي ، جامعة الدلتا للعلوم والتكنولوجيا في مصر. يدمج البرنامج المقترح دورات اللغة الإنجليزية لأغراض محددة (ESP) مع نهج التعلم المختلط في مجال العلاج الطبيعي. اعتمدت الدراسة التصميم شبه التجريبي. درست المجموعة الضابطة دورة اللغة الإنجليزية بالطرق التدريس التقليدية وجهاً لوجه كما درست المجموعة التجريبية دورة ESP المقترحة باستخدام برنامج التعلم المختلط للدراسة. كشفت النتائج الإحصائية أن الدرجات المتوسطة للمجموعة التجريبية تجاوزت الدرجات المتوسطة للمجموعة الضابطة من حيث المهارات اللغوية المعينة اللازمة لطلاب العلاج الطبيعي وفقاً لتخصصهم. وبالتالي ، توصلت الدراسة إلى أن التعلم المختلط أكثر فعالية من التدريس التقليدي وجهاً لوجه في تطوير مهارات اللغة الإنجليزية لدى طلاب العلاج الطبيعي.

الكلمات المفتاحية

التعليم المختلط - اللغة الانجليزية لاغراض الخاصة- اللغة الانجليزية لاغراض الطبية

A Hybrid Learning Program for Developing some English Language Skills for Physical Therapy Faculty Students

Doaa.M.A.El-Sherbiny

English Lecturer

Delta University for Science and Technology

1. Introduction

English is the major language all over the world. Mastering English is a key requirement for success in any profession (Robson, 2014). It represents the primary means of international communication in education in a wide range of subjects such as medicine, social sciences and natural sciences (Hutchinson and Waters, 1992). Consequently, language education witnessed the emergence of English for Specific Purposes (ESP). ESP occupied an increasing significance in English Language Teaching (ELT) since 1960s (Lili, 2015).

ESP programs stress the importance of learner-centered approach in which decisions regarding content and teaching methods depend on the learners' needs of English. (Celani, 2008; Mohammadi & Mousavi, 2013). Hutchinson and Waters (1987) agree with Johns (2013) that ESP courses aim at enabling learners to function sufficiently in a target situation.

It is the responsibility of the ESP teacher to conduct needs' analysis in order to evaluate students' difficulties and tailor the specific materials according to the students' needs and the communicative situation (Westerfield 2010, Basturkman, 2014; Low, 2018). In addition, Alsamadani (2017) points out that needs analysis is a dynamic asset for ESP teachers to determine the learners' basic requirements and define the major areas in which they lack skills. Pegg et al., (2012) stress the importance of prioritizing the employability-related aspects in course design.

Thus, the diversity of reasons behind learning a language can be attributed to the different reasons and perceptions of learners according to their academic and professional needs (Madkur, 2018).

The design and development of any ESP course require the cooperation of content area experts and language teachers (Shi, 2009). The principle of one size fits all and ready-made textbooks should not be recognized in ESP programs (Ramirez, 2015; Hyland, 2016). English for Specific Purposes courses represent the right direction of university English reform (Wang, 2010; Rautenbach, Mann, and Van Ryneveld, 2017).

According to Dudley-Evans and St. Jones (1998) ESP is mainly divided into two main sections which are English for Academic Purposes (EAP) and English for Occupational Purposes (EOP). ESP sections and subsections can be illustrated in the following figure.

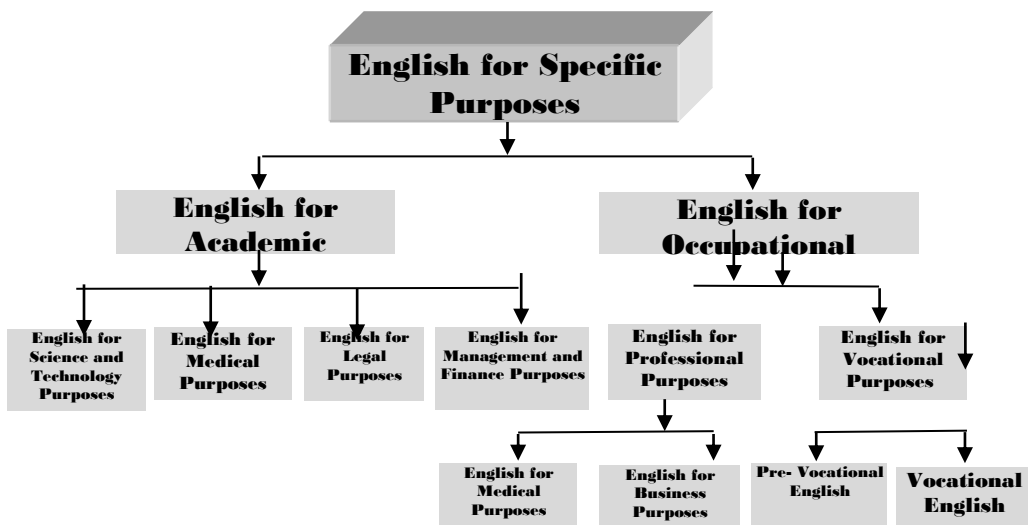


Figure 1: ESP Classification (Dudley-Evans & St. Johns, 1998)

Thus, English for Medical purposes (EMP) is a major sub-branch of ESP. EMP deals with specialized terminology, prefixes,

suffixes and medical topics that develop students language skills and enhance their communicative skills health care field (Master, 2005; Orr, 2005; Yang, 2005).

Medical students and doctors need to develop certain English language skills to carry out their responsibilities and to communicate effectively in the health care field. In addition, mastering the English language maximizes their opportunities in obtaining a good job in the competitive employment market ((Niazi, 2012; Porcaro, 2013). That is why Zrnikova (2014) asserts the importance of making a balance between general English and EMP courses to develop the students' communicative skills.

Moreover, Internet and new technology enhanced greatly English language learning and teaching. Digital technologies led to more integration between computer-mediated instruction and traditional face-to-face classroom teaching. The most important result of combining technology and education is the emergence of e-learning. E-learning has developed in exponential ways at the expense of face-to-face teaching (Bloch, 2013). E-Learning has revolutionized the delivery of learning through the support of rapid advancements in Internet and technology (Chen, et al. 2016).

Delialioglu and Yildirim (2008) point out that there are many problems for completely online instruction such as limited hardware, software, time, and pedagogical problems. This necessitates the idea of integrating the advantages of traditional face-to-face teaching with the advantages of online learning, known as hybrid learning. Hybrid learning is designated as integrated learning, blended learning and multi-method learning. There are many definitions of hybrid learning, but the most common is the combination of virtual and physical learning environments.

Boelens, De Wever and Laer (2015) theorize that hybrid learning is characterized by a deliberate combination of face-to-face and online classroom interventions to instigate learning. Hybrid learning achieves a shift in learning strategies in three aspects: from

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teacher-centered to student-centered learning, from limited to high-frequency interactions between students and resources, and from intermittent to deliberate integration of formative and summative assessments (Watson, 2008; Oh & Park, 2009; Ginns & Ellis, 2009).

In addition, Graham (2006) advocates that hybrid learning will grow and increase to the extent that it will completely replace traditional learning. Besides, the hybrid learning environment provides a solution to different deficiencies in the English as Foreign Language (EFL) learning such as lack of exposure to the target language and adopting insufficient learning strategies (Klimova and Kacetl, 2015).

Azizan (2010) assures that the utilization of technology in classrooms offer extra resources for the students which promotes learners' confidence and competence as well as improves the quality of learning process. Moreover, hybrid learning creates a participative, social, and collaborative learning environment (Yuen, 2010; Rowe, 2012; Güzer and Caner, 2013). Engaging learners in hybrid learning environment especially in EFL setting to develops learners' language skills and promotes their autonomy. In addition, the use of internet enhances learners' motivation and develops positive student learning experience (Harrington, 2010; George & Dellasega, 2011; Jones, Dean, & Hui-Chan, 2010; Stephens & Hennefer, 2013; Trisha Parsons & Kathleen Norman, 2010).

There are various studies which investigated the effect of hybrid learning in the medical field such as Orr (2002) who examined an EMP course for nursing students. The study concluded that EMP courses should develop the learners' linguistic and communicative skills in their specialization such as conversations among doctors, nurses and patients as well as studying topics associated with the medical field.

Zhang and Han (2012) conducted a study on medical learners in a Chinese University. The objective of the study was to investigate the differences between the traditional classroom teaching and the hybrid learning approach in terms of students' attitudes and academic achievement in English. The study findings proved that learners under the hybrid learning model outperformed their counterparts under the traditional learning model. Thus, hybrid learning proved its effectiveness in developing students' language skills and self-confidence in learning English.

Lodhi, et.al, (2018) conducted a study to examine the communicative language needs of medical learners and doctors at the academic and professional level in a survey based study in a Pakistani medical university. Findings revealed that most respondents expressed their need to develop their language skills both on the academic and professional levels. They stressed their need to study English for medical purposes rather than general English to fulfill their communicative needs in their specialization.

Therefore, hybrid learning becomes one of the main successful learning approaches in English language teaching. Learners focus on the acquisition of knowledge and skills necessary for effective communication in their field. This approach combines the advantages and socialization of the traditional classroom with the technological active learning strategies of the online environment (Vesela, 2012; Frydrychova, 2012). Thus, the hybrid learning approach has a positive effect on students' attitudes, satisfaction, flexibility, cooperativeness, motivation,, retention, critical thinking skills and drop-out rate for at risk students (Hughes, 2007; Melton et. al., 2009; Woltering et. al., 2009).

Hence, the hybrid learning approach overcomes the shortcomings of e-learning and exploits different instructional and delivery strategies which promotes learners' satisfaction and boost the learning outcomes. It optimizes achievement of learning

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objectives through applying the right hybrid learning techniques to match the right personal learning style.

2. Context of the Problem

English becomes a crucial prerequisite for medical professionals to obtain up-to-date knowledge and participate in conferences. Students of medicine and medical- related sciences in Egypt spend about five years studying in English. The researcher is motivated to explore the problems of the traditional English language classes taught to the physical therapy students, Delta University for Science and Technology, Egypt. There are four English courses which are compulsory for all university students in order to graduate.

The main concern of the present study is the "English Language (2)" course. This course should include topics related to students' major in order to develop their language skills. However, there are no ready textbooks of suitable content and level that develop the linguistic skills for this specific English course.

Moreover, the researcher observed that the adopted teaching methods for those students depend mainly on the traditional methods of teaching which do not include any technological developments or motivate students to use the Internet. Meanwhile, due to the different societal and technological advancements, traditional teaching methods became unable to meet the escalating demands of higher education. The majority of universities all over the world today adopt e-learning technologies as an instructional medium to improve the learning process outcomes. Hence, a pilot study was conducted to investigate the current situation of the study problem as follows.

- The Pilot Study

The researcher conducted a pilot study on a sample of (60) student to examine the situation of teaching the "English Language (2)" course for the physical therapy students in order to find out the reasons behind the students' low proficiency level in English. The pilot study based on:

1. A program evaluation questionnaire to get the students' responses regarding the current "English Language (2)" course they study as shown on Appendix 1.
2. Content analysis of the existing English course.
3. Informal interviews with the TEFL experts, Physical Therapy specialists, and the students.

The pilot study revealed the following:

The questionnaire results indicated that the majority of students responded negatively to the usefulness of the existing English course in fulfilling their linguistic, academic and professional needs. The results showed that (88%) of the students are not satisfied with the current English course, (8%) are satisfied to some extent and (4%) are satisfied with the existing course as shown in Figure 2.

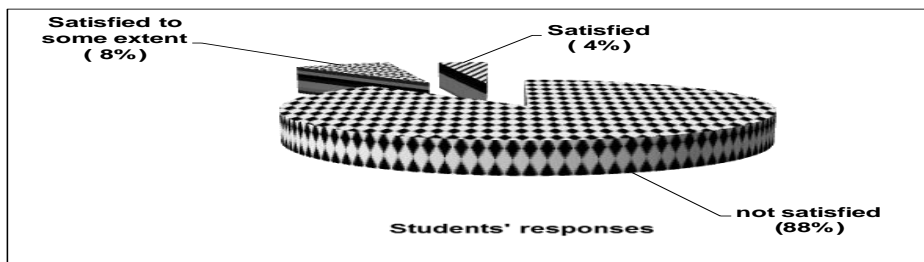


Figure 2: The questionnaire results of the current English course

Analyzing the course content revealed that it deals with general topics and general skills not specifically designed for the students according to their specialization and needs. It is more

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related to general English than to ESP courses, and then it is more away from students' linguistic needs. Furthermore, the adopted teaching methods depend mainly on traditional methods of lecturing. These methods are teacher- centered and make students passive recipients of information instead of being active participants.

Moreover, the interviews and the questionnaire results proved that students need to study English for medical purposes rather than English for general purposes. Students demonstrated their interest in developing their language skills in light of their specialization and the new technological developments. Both the TEFL and academic content area specialists agreed that students are in a severe need to develop their linguistic skills in the physical therapy field. Particularly, English becomes a fundamental requisite for the Egyptian learners in the healthcare field. They should master the English language in order to cope with new advancements, and pursue successful professions.

Based on the pilot study, it could be concluded that the needed language skills for the students can be summarized in the vocabulary and terminology, reading comprehension, writing and translation skills in the physical therapy field. In addition, the hybrid learning approach provides a key solution for the linguistic problems of medical learners in Egypt. It can be applicable to a wide range of disciplines. However, studies related to developing the English language skills of physical therapy students in the Egyptian society have been very rare, which is a major motive for conducting the present study. More importantly, no previous research-to the best of the researcher knowledge- has been carried out that integrates ESP courses with the hybrid learning approach in the Physical Therapy field, in addition to investigating its effectiveness in developing the target language skills for the learners. Moreover, the obtained results can be applied to any Physical Therapy faculty in any other university. These remarks

help justify conducting the present study. Hence, it is the critical time for the researcher to begin with designing the appropriate ESP course, and to develop the suitable hybrid learning program website which suits both the content and the target learners.

3. Problem of the Study

The problem of the present study can be expressed in the students' low proficiency level in English concerning the essential EFL language skills, and the inadequacy of the existing English course.

Therefore, this study sought to examine the effectiveness of the proposed hybrid learning program in developing the needed English language skills for the Faculty of Physical Therapy students through investigating the following main question:

"What is the effectiveness of the proposed hybrid learning program in developing some English language skills for the Physical Therapy Faculty students?"

This study question can be subdivided into the following questions:

1. What are the needed English language skills for the physical therapy students according to their specialization?
2. To what extent do the physical therapy students possess these needed English language skills?
3. What are the bases of the proposed hybrid learning program for developing the students' English language skills in the physical therapy field?
4. To what extent will the proposed hybrid learning program be effective in developing the students' English language skills in the physical therapy field?

4. Hypotheses of the Study

The present study tested the following hypotheses:

1. There will be statistically significant differences at the 0.001 level between the post test mean scores of the experimental and control groups on the physical therapy vocabulary/terms and structure skills in favor of the experimental group.
2. There will be statistically significant differences at the 0.001 level between the post test mean scores of the experimental and control groups on the physical therapy reading comprehension skills in favor of the experimental group.
3. There will be statistically significant differences at the 0.001 level between the post test mean scores of the experimental and control groups on the physical therapy writing skills in favor of the experimental group.
4. There will be statistically significant differences at the 0.001 level between the post test mean scores of the experimental and control groups on the physical therapy translation skills in favor of the experimental group.
5. There will be statistically significant differences at the 0.001 level between the post test mean scores of the experimental and control groups on the total test marks in favor of the experimental group.

5. Methodology

A. Design

The present study follows the two groups pre/ post test quasi experimental design (control group and experimental group). The control group studied the traditional English language course through the traditional face-to-face classroom teaching, while the experimental group studied the proposed hybrid learning program

through the study designed website in addition to the traditional course.

B. Participants

The participants of the present study are a random sample of the Egyptian students studying at the Faculty of Physical Therapy, Delta University for Science and Technology, who study the "English Language (2)", course aged from (19-22) years. They are assigned randomly into two equal groups; the control group 30 student (16 male and 14 female) and the experimental group 30 students (18male and 12 female).

C. Instruments of the Study

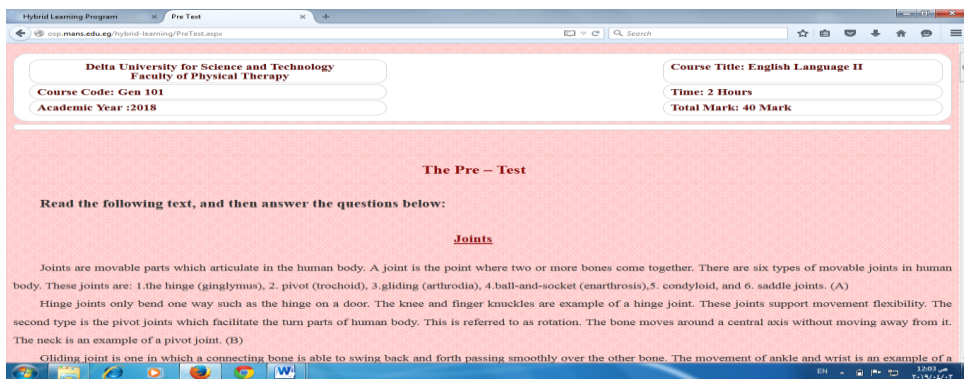
The study instruments are prepared by the researcher, which include:

- ***A needs analysis questionnaire:*** It was administered to the students, TEFL experts and physical therapy specialists in order to determine the needed English language skills for the students. The items of the questionnaire have been chosen through reviewing related studies in designing ESP and hybrid learning programs; and through interviews with the students, TEFL experts and physical therapy specialists in the physical therapy field. In order to verify the questionnaire validity, it was presented to jury members (12 TEFL experts and 12 physical therapy specialists). Some modifications were made depending on the jury members' suggestions. In addition, the reliability of the questionnaire was computed using the Alpha Cronbach method. Its value in the TEFL experts' questionnaire was 0.942, in the physical therapy specialists questionnaire was 0.846, and in the students' questionnaire was 0.848. So, the Alpha Cronbach values were high which prove the high reliability of the questionnaire. Hence, the questionnaire is reliable (Appendix 2).

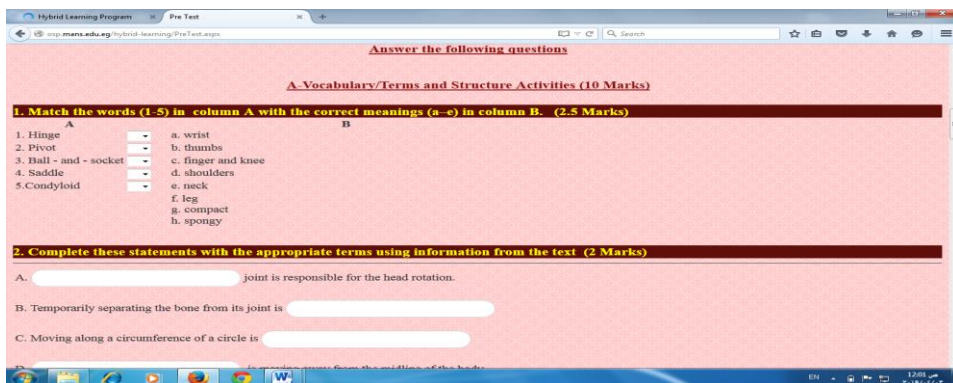
- ***A Pre/ Post English language skills test:*** To investigate the effectiveness of the proposed hybrid learning program regarding the target language skills. The test was administered to the experimental

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and control groups' students before the treatment in order to evaluate the equivalency of the two groups in terms of the study variables and the preliminary information. In addition, it was administered after the experimentation to investigate the effectiveness of the study proposed program in developing the target language skills. Furthermore, it represents a summative assessment technique in order to compare the students' progress level before and after the experimentation. The time allocated for the pre/post test is two hours online in the computer laboratory with the presence of the teacher. The total test score is forty marks, ten marks for each skill as shown on the following figure (3 a-b).



(a)



(b)

Figure 3 (a-b): The Pre/Post Test

- **Validity of the Pre/Post Language Skills Test:** The pre/post test was submitted to a jury of TEFL and Linguistics experts to check its validity and suitability for the subjects of the study in terms of the test appropriateness for the students' major, students' level and the intended language skills it measures. All the jury members agreed that the pre/post test measures the target English language skills and agreed on its suitability for the target students which prove its validity.

- **Reliability of the Pre/Post Language Skills Test:** The reliability of the pre/post test was calculated by the Alpha Cronbach method. It was 0.823, which is high. This value indicates the high internal coherence of the test. Thus, the pre/post test is reliable.

In addition, the pre/post test was piloted on a sample (N=33) of the physical therapy students. Then, the same test was administered again on the same sample after four weeks. The correlation coefficient was calculated between the results of the test and the re-test for each skill and for the total test marks of the test using Pearson Product Correlation. The results were as follows: The correlation coefficient between the first and second applications concerning the vocabulary/terms and structure skills was 0.82, the reading comprehension skills was 0.86, the writing skills was 0.80, the translation skills was 0.84, and the total test marks was 0.88. These results are all significant at 0.001 level. Thus, these values indicate the high correlation between the test and the re-test of the pre/post test which proves its high reliability. Hence, the pre/post language skills test is reliable.

The pre/post language skills test was piloted on a random sample of the students to check its readability, time suitability, make sure that the test instructions are clear and to check the flexibility of dealing with the study program website in an easy way.

6. Material of the Study

The material of the study is the proposed hybrid learning program for developing some English language skills for the Faculty of Physical Therapy students. The program topics and the language skills were identified according to the results of the questionnaire and interviews with the TEFL experts and physical therapy specialists in addition to the students' interviews. These topics were chosen from a variety of new Physical Therapy text books and references in order to provide the students with up-to-date information in their major. In addition, the topics were modified to suit the target language skills of the students according to their level and specialization. Moreover, some translation passages were added and modified from different websites for the same purpose.

6.1 Objectives of the Program

Objectives refer to the target language skills which the students will be able to achieve after studying the program. The present program objectives can be summarized as follows:

a. Developing some vocabulary/terms and structure skills in the Physical Therapy field:

By the end of the program, students will be able to:

- Understand vocabulary in the physical therapy field.
- Use vocabulary in meaningful sentences.
- Recognize abbreviations related to the physical therapy field.
- Realize the definitions of related terminologies in their specialization.
- Deduce the meaning of new vocabulary in their major.

b. Developing some reading comprehension skills in the Physical Therapy field:

By the end of the program, students will be able to:

- Skim and scan English topics, and books in the physical therapy field.
- Understand the main idea of the text.
- Infer the supporting details in the text.
- Deduce meaning from context.
- Evaluate and criticize the read text.

c. Developing some writing skills in the Physical Therapy field:

By the end of the program, students will be able to:

- Write grammatically correct and meaningful sentences.
- Write topics and short notes related to physical therapy.
- Write freely and fluently in English.
- Summarize medical topics written in English.

d. Developing some translation skills in the Physical Therapy field:

By the end of the program, students will be able to translate passage related to their major effectively and fluently. According to the needs analysis questionnaire, all the jury members and the students agreed that translating from English into Arabic is very important for medical learners and not vice versa because almost all the references and textbooks in the physical therapy field are written in English.

6.2 The Content of the Hybrid Learning Program

The proposed ESP hybrid learning program is designed to qualify non-native speakers of English with the language-related skills and tasks necessary for success in the physical therapy field. The program focuses on the academic and professional language

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skills needed by physical therapy students in the Egyptian society. It enhances peer work and shared learning. The present study program consists of twelve sessions along the semester in the physical therapy field. The needed language skills were determined in light of the needs analysis questionnaire results and the informal interviews with the students, and the TEFL, Linguistics and academic content area experts. Moreover, the researcher interviewed the physical therapy specialists to determine the most important and appropriate topics for the students, and the session's topics were assigned according to their opinions. Hence, the target language skills were determined and the sessions' topics were assigned. Then, the researcher developed the relevant exercises/ activities that cope with both the target language skills and the content. Finally, the program was formulated in the form of the interactive hybrid learning website which fulfills the criteria of effective educational website such as flexibility, clarity, ease of interaction and communication. The program content was specified and formulated in the following sessions, as shown on figure (4) below.

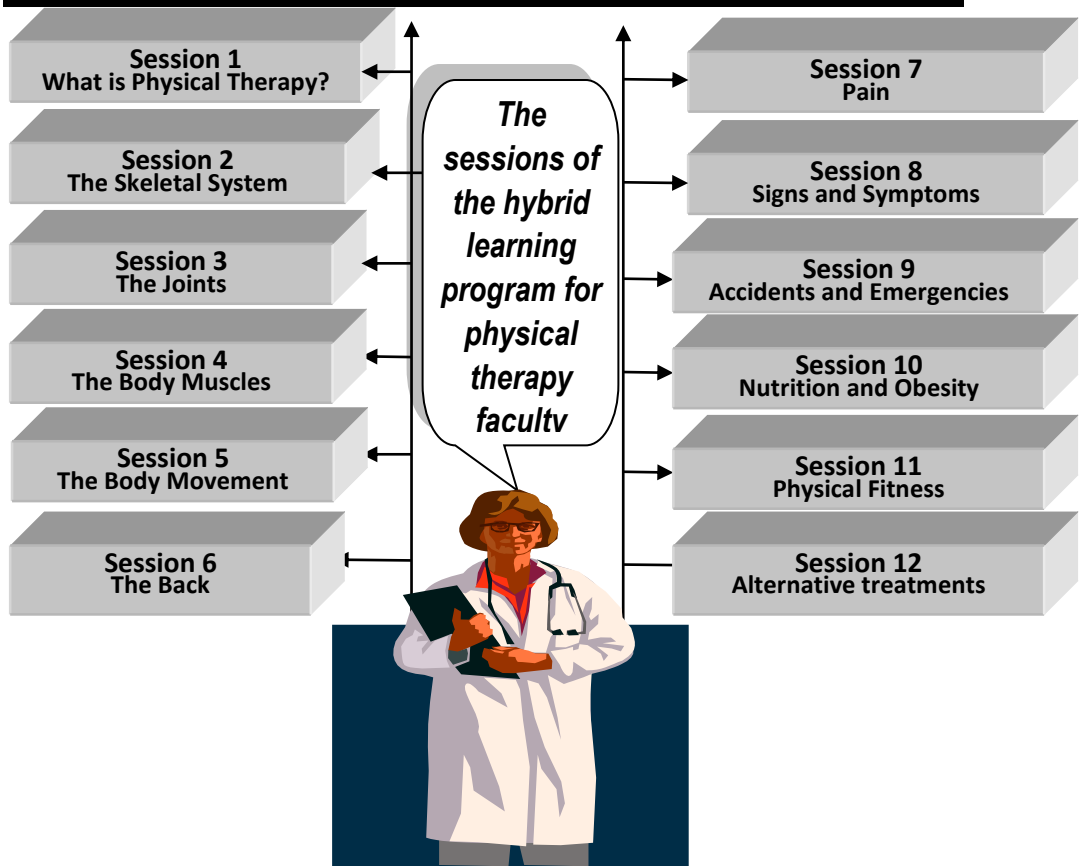


Figure 4: A Framework of the Hybrid Learning Program Content

All the program sessions follow the same structure as follows:

- **The Session Title:** each session begins with the title.
- **Learning Objectives:** the learning objectives in each session are stated behaviorally to address the intended learning outcomes and the target language skills.
- **Pre-reading Activities:** include different questions that act as a warm up for the session topic in order to activate the students' prior knowledge concerning this topic.
- **The Content:** the session content is presented in a specialized and simple language highlighting different

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specific vocabularies, terms, structures, figures and information associated with the physical therapy field. The topics are arranged in a logical order beginning from the simplest to the more difficult.

- **Exercises:** include various activities that address the target English language skills of the study.
- **Evaluation:** it is the last section in each session. It acts as a formative assessment in order to monitor the students' progress. It provides more exercises associated with the target language skills.

The session structure can be illustrated in figure 5.

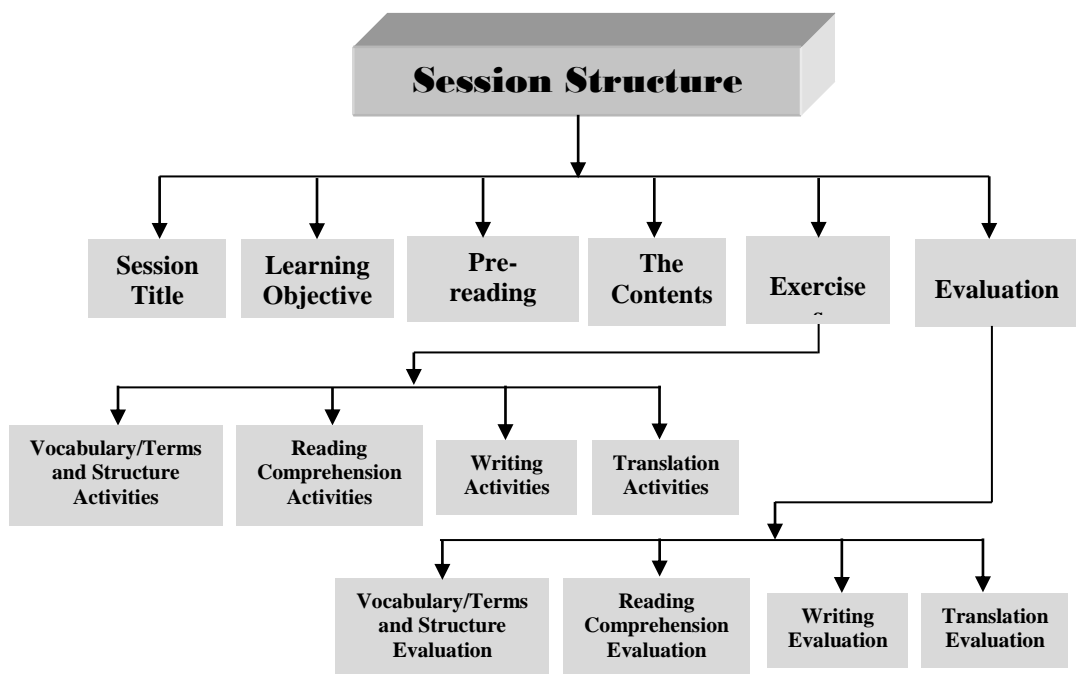


Figure 5: The Session Structure

6.3 The Hybrid learning program website

The website and its content were designed and developed by the researcher. The website was designed in ASP.NET 2.0 and SQL programming languages and was validated by jury members of TEFL and physical therapy experts. The hybrid learning program is available on the following website: <http://osp.mans.edu.eg/hybrid-learning/>. Participants of the experimental group are only allowed to access the website because every student has a specific username and password. The website will be explained in details as follows:

The program home page displays all the program main icons in an attractive and communicative manner such as "Welcome", "Program Objectives" as shown on figure (6).



Figure 6: The program Home Page

Each student should begin first with the pretest before studying the program in order to be able to access the program sessions regardless of his/her total mark. To go through the first session, the student should click on the "Sessions" icon in the home page. Then, a drop-down menu of the program twelve sessions (*Session 1, Session 2,Session 12*) will be displayed in an ordered list. When clicking on "session 1" as an example of the twelve sessions, a drop-down menu will appear illustrating the session items in icons as shown on figure (7).

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Session1: LIVING IN A DIGITAL A...

Not secure | osp.mans.edu.eg/hybrid-learning/Sessions/Session/Default.aspx?Sid=1

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Sessions

- 1st Session
- I. Learning Objectives
- II. Pre-reading Activities
- III. The Content
- IV. Exercises
- V. Evaluation
- VI. Progress Level

Session 1

DEFINITION OF PHYSICAL THERAPY

Learning Objectives

At the completion of this session, students will be able to:

- Skim and identify the main idea of a text.
- Scan and provide answers to comprehension questions such as:
 - What is the definition of Physical Therapy?
 - What are the functions of physical therapist?
 - What are the different specialty areas of physiotherapy?
- Decide the meaning of new vocabulary through reading the text.
- Distinguish between verbs, nouns and adverbs.
- Identify abbreviations associated with physical therapy.
- Write about physical therapy applications in different fields using simple and compound sentences.
- Summarize English topics associated with physical therapy impacts in different fields.
- Translate passages related to physical therapy applications from English into Arabic.

Figure 7 : The Session Items

The student should answer the "pre-reading questions" before each session in order to be able to study the session content "The Content". Then, after content, the student should go through some exercises in order to evaluate and develop the target language skills through clicking on the "Exercises" hyperlink after each session. The objective questions are corrected automatically through the program website database and their results are displayed automatically to the student after clicking on the "Send Results" button after each question. While, the subjective questions are sent to the researcher to be corrected when the students clicks on the button "Send Results" after each question as shown on figures 8-9.

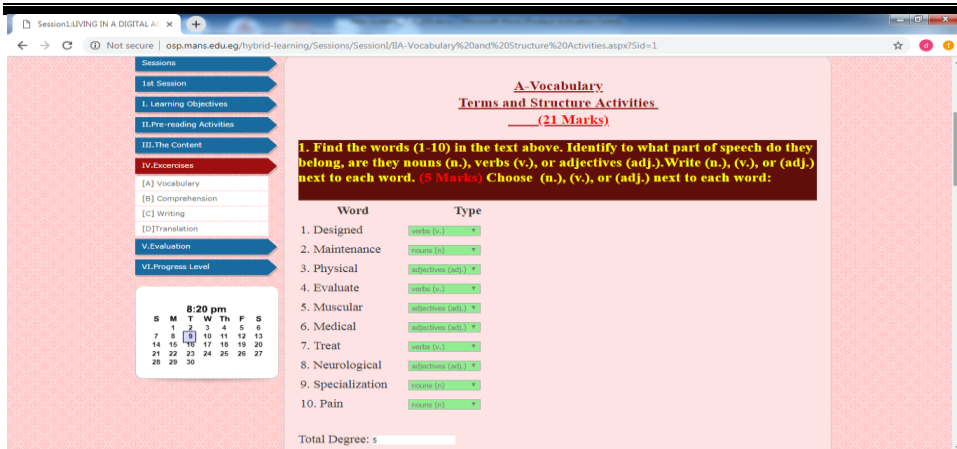


Figure 8: Correction of the Objective Questions

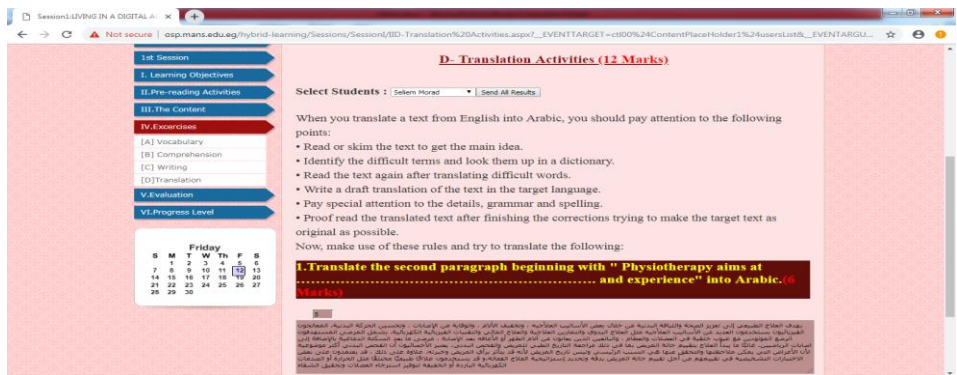


Figure 9: Correction of the Subjective Questions

Then, there are some "Evaluation" activities after each session to evaluate the students' recognition and development of the target language skills as shown in figure 10.

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Figure 10: The Evaluation Activities

The teacher can check each student progress level within the same session through the "*Progress Level*" icon in each session drop-down menu which compares between the total marks of both the "*Exercises*" activities and the "*Evaluation*" activities. This progress level is displayed in a chart form; a column for the "*Exercises*" activities and the other represents the "*Evaluation*" activities within the same session as shown on figure 11.

Furthermore, the website enjoys many facilities to enhance communication between students such as "*Chat Room*" which provides all chatting opportunities to the experimental participants as groups not privately. In addition, the website enjoys the "*Mail Box*" utilities, which provides the ability to communicate with all e-mail programs such as "Yahoo, G-Mail, Outlook and Hotmail". It offers private communication between all the experimental participants and the researcher.



Figure 11: The Progress Level of the 1th session

Besides, the website offers a "Student Forum" which allows students to add more topics associated with their specialization in addition to reading and commenting on other students' topics as shown on figure 12.



Figure 12: The Student Forum

The program administrator has the authority to remove any topic or comment created by any students if it is irrelevant or incorrect by clicking on the "Remove Subject" button.

Moreover, the website provides a formative assessment for each experimental participant through comparing the total marks for the whole twelve sessions for each student as shown on figure 13.

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Figure 13: The Total Progress Level of all Sessions

Finally, the teacher can check the overall progress for each student after studying the whole twelve sessions of the program through the "Progress Level" icon in the main menu in the home page. This icon compares between the pretest results and the post test result for each student. It is displayed in a chart form composed of two columns; one for the pretest and the other is represents the post test. So, the total progress level for each student is compared and displayed clearly after finishing the study program as shown on figure 14.

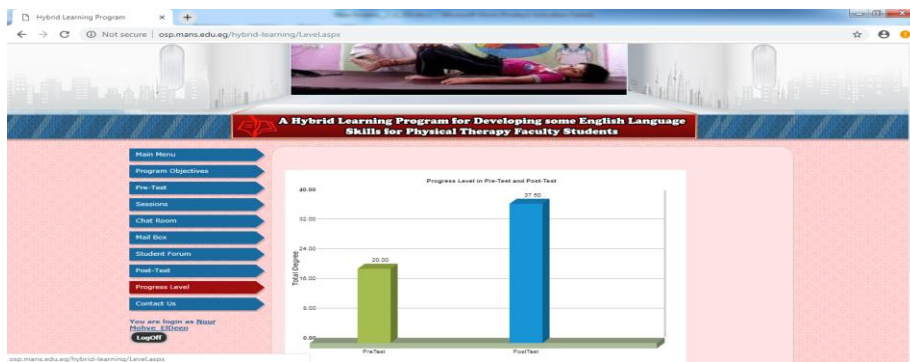


Figure 14: The Pre-post test Result

7. The Experiment

The experimentation took place during the second term of the academic year 2018. The experimental and control groups were randomly assigned into two equal groups. The pre-test was administered to both groups before the experimental treatment to make sure that the students were, to a great extent, equivalent in their entry level and preliminary information with regard to the study target language skills. The two groups were taught by the researcher, thus the teacher variable is under control. The control group studied the traditional English course via the traditional face-to-face classroom teaching. The experimental group adopted the hybrid learning approach. They studied the proposed ESP hybrid learning program via the study website which is specifically designed for the physical therapy students in light of their specialization in addition to the traditional course.

Almost the majority of the course was conducted online except for some periodical face-to-face meetings for clarifications and problem solving. The researcher explained what hybrid learning is, its applications, advantages and the instructional procedures during the first meeting with the experimental participants illustrating with examples from the program website. The face-to-face meetings were carried out once a week, two hours each in the computer laboratory. Class activities included discussions and summary of the session content in addition to some classroom activities such as oral presentations, role playing, and group discussions in order to develop the students self-learning and critical thinking skills. Most activities were dealt with online whether synchronously or asynchronously anytime and anywhere depending on the students' time and pace of learning in order to improve their autonomous learning awareness. There was a due time for submitting assignments online for each session, and the feedback was sent immediately to the students through the program website. The researcher was all the time with the experimental students

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whether physically or virtually online through the program website utilities such as e-mail, chat room, and students' forum.

The experimental treatment lasted for twelve weeks including the experimentation for the pre-test and the post-test implementation. Then, the obtained data of the pre/post-test were treated statistically using the SPSS program.

The majority of students in the present study expressed positive attitudes towards the hybrid learning program. Students commented that hybrid learning is a convenient and flexible approach to language teaching and learning. Besides, it improved their computer skills which make learning more interesting and multifaceted. Students noted that a major advantage of this approach is the continuous availability of the electronic material anytime and anywhere. They could study and repeat until they become satisfied. They became able to study the taught material at their own pace of learning without the embarrassment of asking the teacher to repeat in front of their colleagues. In addition, they had the opportunity to establish closer relationships with their colleagues through interaction in the various hybrid learning activities.

8. Results and Discussion

8.1 The Results

Before examining the study hypotheses, the t-test for independent samples was calculated between the mean scores of the experimental and control groups on the pretest to investigate the consistency between the mean scores of the two groups to make sure that any differences expected to be found on the post test, if any, are due to the effectiveness of the study proposed program. Table 1 shows the mean scores, standard deviation and the t-test values for the two study groups on the pretest concerning the study variables and the total test marks.

As indicated in table 1, the t-test shows that there are no statistically significant differences between the mean scores of the

experimental and control groups on the pretest at the (0.001) level. The t- value is (0.4953) in the vocabulary/terms and structure skills, the t-value is (0.4131) in the reading comprehension skills, and the t-value in the writing skills is (2.1213). Concerning the translation skills in physical therapy, the t- value is (0.7659) and as for the total test marks, the t- value is (0.8432). All these results indicate that there are no statistically significant differences between the two groups prior to the experiment and the two groups are homogenous and equivalent.

Table1: The t-test values for the mean differences between the two groups on the pretest

Skill	Study Group	No.	Mean	Standard Deviation	Freedom Degrees	t - Value	Significance level
Vocabulary / Terms and Structure	Control	30	2.816	2.039	58	0.4953	0.001
	Experimental	30	3.116	2.077			
Reading Comprehension	Control	30	2.717	2.417	58	0.4131	0.001
	Experimental	30	2.75	2.083			
Writing	Control	30	2.45	1.699	58	2.1213	0.001
	Experimental	30	3.51	1.767			
Translation	Control	30	3.216	1.806	58	0.7659	0.001
	Experimental	30	3.616	1.756			
Total Test Marks	Control	30	11.649	4.525	58	0.8432	0.001
	Experimental	30	13.45	4.225			

After the experimentation, the means, standard deviations and t-test values were calculated in order to investigate whether there are statistical significant differences between the post test mean scores of the experimental and control groups with regard to the study variables to investigate the study hypotheses as shown on table 2.

As shown on table 2, the t-test illustrates that there are statistically significant differences between the post test mean scores of the experimental and control groups vocabulary/terms and structure skills in the physical therapy field at the (0.001) level, the t- value is (24.287) in favor of the experimental group. So, the first hypothesis is supported. The t- value is (23.848) in the reading

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comprehension skills in physical therapy in favor of the experimental group. Thus, the second hypothesis is proved. In addition, the t-value is (40.891) in favor of the experimental group regarding the writing skills in the physical therapy field. Hence, the third hypothesis is verified. Besides, the t- value is (32.988) in relation to the translation skills in physical therapy in favor of the experimental group. Thus, the fourth hypothesis is proved. Finally, the t- value is (55.197) concerning the total test marks in favor of the experimental group. This means that the experimental participants have achieved highly in the post test. Then, the fifth hypothesis is assured.

Table 2: The t-test values for the mean differences between the two groups on the post test

Skill	Study Group	No.	Mean	Standard Deviation	Freedom Degrees	t-Value	Significance level
Vocabulary / Terms and Structure	Control	30	3.29	2.123	58	24.287	0.001
	Experimental	30	16.57	1.732			
Reading Comprehension	Control	30	2.873	2.253	58	23.848	0.001
	Experimental	30	16.973	1.852			
Writing	Control	30	2.673	1.563	58	40.891	0.001
	Experimental	30	17.574	0.747			
Translation	Control	30	3.406	2.032	58	32.988	0.001
	Experimental	30	18.012	0.714			
Total Test Marks	Control	30	12.723	4.401	58	55.197	0.001
	Experimental	30	69.605	3.328			

Thus, as a result of the above discussion, it could be concluded that the statistically significant differences between the experimental and control groups on the post test are attributed to the present study proposed hybrid learning program for developing some English language skills for the physical therapy faculty students.

Moreover, in order to verify the effectiveness of the proposed program, the Gain Ratio was calculated using the Modified Black's Gain Ratio as shown on table 3.

The gain ratio is considered satisfactory and effective if (MG_{Blake}) value is equal or more than 1. 2. Concerning the study program, the Modified Black's Gain Ratio values (MG_{Blake}) for the study variables lie between (1.3977) and (1.5271) as shown on table 3, which are all more than (1.2). So, all these values prove the effectiveness of the present study hybrid learning program.

Table 3: The gain ratio values for the study variables

Skill	Modified Black's Gain Ratio (MG_{Blake})
Vocabulary / Terms and Structure Skills	1.3977
Reading Comprehension Skills	1.4639
Writing Skills	1.4851
Translation Skills	1.5271
Total Test Marks	1.4678

8.2 The Discussion

The statistical results indicate that there is a remarkable achievement in the experimental group participants' target language skills. These results could be attributed to many factors such as designing an ESP course associated with the students' major which increased their vocabulary and terms stock in their specialization. Also, the grammatical structures the experimental participants were instructed to use functionally helped them produce more structurally correct and meaningful sentences. Besides, all the program topics are closely related to the students' specialization such as "The Body Muscles, Nutrition and Obesity, Physical Fitness, etc."

Moreover, the program website enjoys the characteristics of interactive educational websites such as the integration between texts and images, e-mails, chat room, student forum, online questions, online tests, immediate feedback, flexibility and ease of communication. In addition, the face-to-face classroom interaction and discussions positively enhanced students' cooperation and understanding. All these elements contributed greatly in developing the students' linguistic skills.

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The present study results go in line with those of Lin (2018) who asserts that ESP is a unique approach to English teaching and learning. It provides courses specifically designed to fulfill the students' linguistic needs. The hybrid learning approach enhances students' linguistic skills through providing them with the ability to work on all aspects of knowing a word such as spelling, meaning and grammatical knowledge. Besides, the hybrid learning approach contributes greatly to vocabulary learning and yields better results as advocated by (Johnson and Heffernan, 2006; Ma and Kelly, 2006; Lenders, 2008; Zapata and Sagarra, 2007, Jabar & Ali, 2016; Li, 2017).

In addition, Jia, et al. (2012) emphasize the importance of learning vocabulary emphasizing that it is a basic component to enhance reading comprehension, reading fluency, writing, and communication skills. Moreover, Internet and computer are essential tools in the recent generation daily life. They use computer on a regular basis in their daily life for entertainment, chatting, reading news, sending e-mails, etc. So, the hybrid learning program website improved the learners' writing skills as it yielded the opportunity to exchange ideas and discussions with each other through the "Chat Room, Mail Box and Student Forum" provided by the program website. Besides, the hesitant and shy students are encouraged to express themselves through the online communication. These findings go in line with Coniam and Mak (2008); Coyle (2010); Cowan, Herring, Rich, and Wilkes (2009); Pop (2010); Franco (2008) and Kennedy (2010) that the Web can improve the students' writing skills efficiency.

Hybrid learning is very effective in English language teaching and learning, both teachers and learners enjoyed this novel approach. It makes the learning process more flexible, interesting and effective (Khan, 2014). More specifically, Ferguson (2013) advocates that EMP courses stress the importance of enhancing the medical learners' practice and writing in medical genres such as case

reports, letters of referral etc., . The hybrid learning environment improves students' writing skills and enriches their grammatical correctness, structural coherence, accuracy, punctuation, spelling, word choice, word order, vocabulary and quality of writing which develop their language skills (Bubas, Kovacic and Zlatovic, 2007).

Moreover, the improvement in the experimental participants' translation skills may be attributed to studying the study hybrid learning program, as its content is mainly designed and focused on developing students' linguistic, academic and professional skills. The program provided the students with a large variety of resources including reading topics, passages for translation, and various activities related to their major which in turn improved their translation skills. These results agree with Smoak (2003) who asserts that “*ESP is English instruction based on actual and immediate needs of learners. ESP is needs based and task oriented*”. In addition, Gao (2007) advocates that the major concern in designing ESP courses is the learners' needs analysis, identification of realistic goals and objectives, integration of grammatical functions, and the required qualifications for future workplace. Moreover, Holley & Dobson (2008); Sen (2011); and Astalin (2012) point out that hybrid learning provides an effective and flexible platform which addresses diverse students' learning styles and needs. These results are consistent with previous studies which proved that English learning is very important for learners in the physical therapy field as prospective doctors (Kayaoğlu & Akbaş, 2016). Learners frequently attach great importance to the linguistic skills that they usually use to help them achieve the major aim of developing their language skills, especially those specializations that depend heavily on English such as the medical field (Chatsungnoen, 2015; and Al Qurashi, 2016).

As a result, the advancement occurred on the part of the experimental participants concerning the target language skills can be attributed to the study hybrid learning program as illustrated in the following figures (19 to 23).

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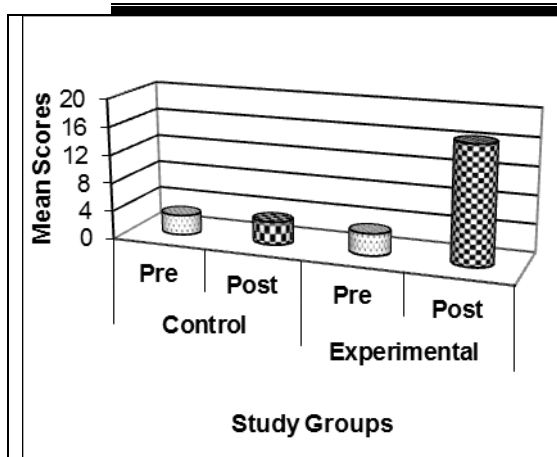


Figure 19: The results of vocabulary / terms and structure skills in the study groups

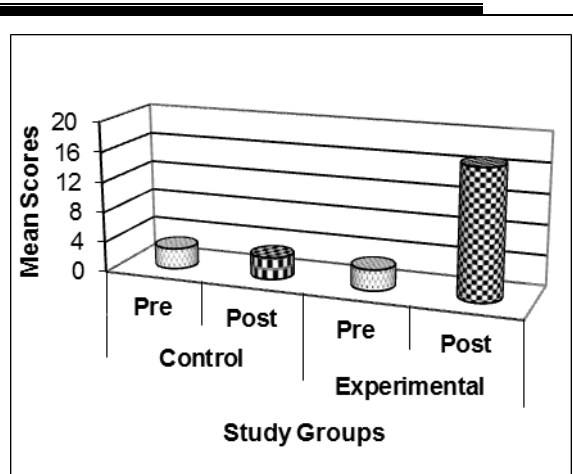


Figure 20: The results of reading comprehension skills in the study groups

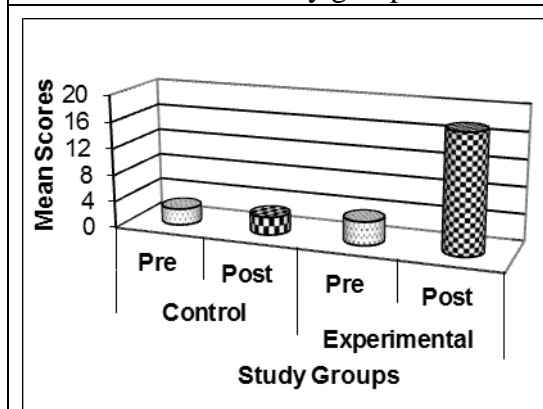


Figure 21: The results of writing skills in the study groups

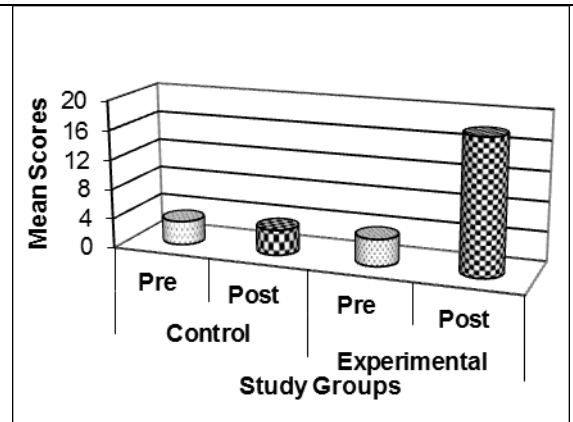


Figure 22: The results of translation skills in the study groups

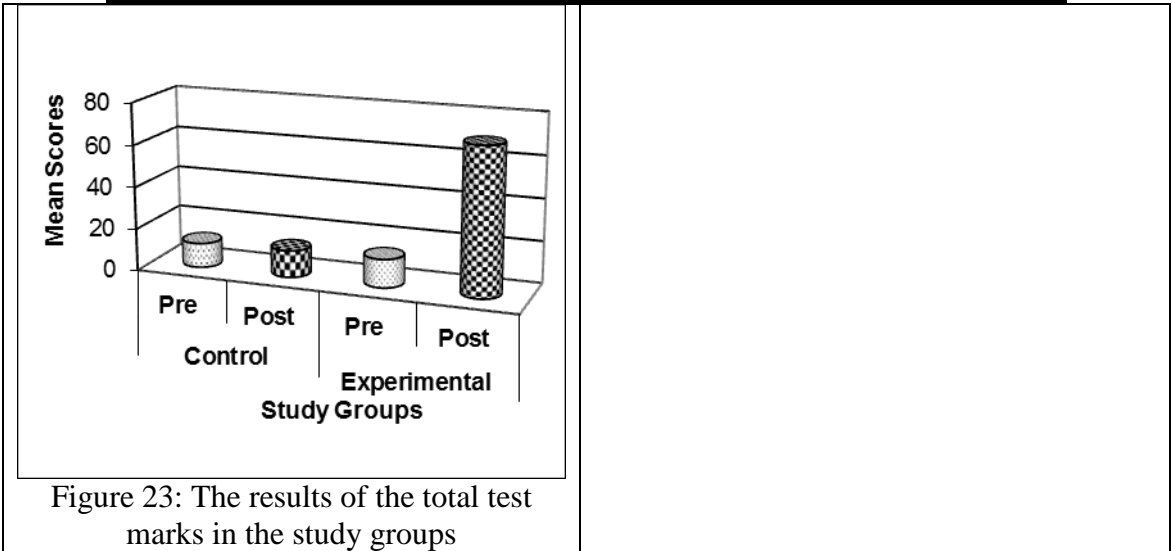


Figure 23: The results of the total test marks in the study groups

Thus, the study results highlighted the significant effect of the hybrid learning approach on enhancing the linguistic skills of the physical therapy students.

9. Conclusion and Recommendations

The conclusion of the present study was drawn in light of the obtained data and statistical analysis. These results proved that ESP learners prefer to study topics related to their specialization. English is very essential to prepare doctors and medical-related professionals who should master communicative competence in their major in order to be able to compete globally all over the world. In addition, the study proved that hybrid learning is very effective in the EFL setting. It achieved significant results in developing the language skills of the physical therapy students. Thus, the major contribution of the present study is the amalgamation between ESP and hybrid learning programs which impacted greatly the language skills of the students and positively enriched the learning process outcomes.

Moreover, learners bear more responsibility in hybrid learning than in traditional learning which improves their self-development and autonomy as they become responsible for their

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learning especially the online component (Gormley, 2009; Carbonaro, 2008; Hsu and Hsieh, 2011; So and Brush, 2008; Veneri, 2011; Pérez and Riveros, 2014; Chen and DeBoer, 2015).

Internet has shifted the methods of teaching into new different horizons. Hybrid learning created a shift in the teacher's roles. It ideally combines the advantageous aspects of traditional and online learning. The teacher can be viewed as a coordinator, administrator, organizer, developer, and a promoter to the learning process. Thus, cultivating students' autonomy should be a major goal for educators. English language courses for medical related professions should focus more on developing language-related skills such as communication, understanding, and fluency. Hence, there is an urgent need to restructure English for medical purposes programs in the Egyptian society in order to prepare qualified medical specialists.

In conclusion, the hybrid learning approach achieved a positive impact in the ESP setting in the physical therapy field and may be applicable to other medical disciplines. It provides both the incidental learning through the online learning and the intentional learning through the traditional learning. It improves the quality of the learning process. These findings encouraged the author to apply hybrid learning in the teaching of other medical programs.

Recommendations for Future Research:

The study results revealed a need for further research in the following areas:

1. There is an urgent need to design ESP courses in different specializations.
2. Further studies can be carried out in branches of medical education for developing the English language skills of medical learners such as nursing.

3. Further studies can be carried out on how to design and manage EFL hybrid learning programs to cultivate effective autonomous learning.
4. Adopting the multiple intelligence theory for developing the English language skills of medical learners.

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Appendix 1

A Content Analysis Questionnaire

- **Would you please read the following sentences carefully and tick (√) where applicable.**

No.	Item	Yes	To some Extent	No
1	Are the objectives of the current English language course clear to you?			
2	Does the current English language course meet the academic and professional needs of physical therapy students?			
3	Are the topics of the current English language course interesting and increase the motivation for learning.			
4	Does the current English language course develop the skills in writing topics and reports in the physical therapy field?			
5	Does the current English language course develop the ability to express the ideas accurately in the field of physical therapy?			
6	Does the current English language course develop the ability to understand terminology and structure in physical therapy?			
7	Does the current English language course develop the ability to understand topics in the physical therapy field?			
8	Does the current English language course develop the communication skills with others?			
9	Does the current English language course develop the ability to translate topics in the physical therapy field?			

Appendix 2

A Needs Analysis Questionnaire

- Would you please read the following sentences carefully and tick (✓) where applicable.

No.	Language Skills	Very Important	Important	Not Important
1	English language is important for the study of physical therapy.			
3	Reading English text books, articles and topics in physical therapy.			
4	Understanding the main idea of the text.			
5	Understanding the supporting details in the text.			
6	Writing short notes in the physical therapy field.			
7	Writing English technical reports in physical therapy.			
8	Writing topics related to physical therapy field.			
9	Summarizing English topics in physical therapy.			
10	Speaking in English in the physical therapy field.			
11	Conducting oral discussion and presentation in English at the class time.			
12	Listening to oral English related to physical therapy.			
13	Translating physical therapy topics from English into Arabic.			
14	Translating physical therapy topics from Arabic into English.			
15	Writing answers to exam questions.			
16	Deducing meaning from context.			
17	Deducing the meaning of new vocabulary.			
18	Using vocabulary and abbreviations in correct sentences.			
19	Identifying different definitions of terminology in the physical therapy field.			
20	Using terms and abbreviations in different situations in the physical therapy.			

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