

The Effectiveness of Web Research-Based English Language Instruction in Enhancing Physiotherapy Students' Independent Academic Language Learning Skills

فاعلية التدريس باللغة الإنجليزية القائم علي البحث عبر الإنترنت
في تعزيز مهارات تعلم اللغة الأكاديمي المستقل لطلاب العلاج الطبيعي

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The Effectiveness of Web Research-Based English Language Instruction in Enhancing Physiotherapy Students' Independent Academic Language Learning Skills

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ABSTRACT:

Purpose: This paper investigates the effectiveness of web research-based English language instruction, English for Physiotherapy course, first year. The aim of this study is to determine the impact of web research-based English language instruction, Egyptian Chinese university Physiotherapy students' in enhancing their independent academic language learning skills. This study was conducted in a quantitative design with many participants, first year physiotherapy students (English for academic purpose).

Methodology: The study used a quantitative approach. a survey, a pre and a posttest were used to collect data.

Findings: The results revealed that web- research -based English language instruction was effective for physiotherapy students'(English for academic purpose students) in enhancing independent academic language learning skills.

Practical implications: web research-based English language instruction was approved for independent English for academic language teaching and learning.

Keywords: web research-based English language instruction, English for academic purposes, independent language learning skills.

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1-Introduction:

English for Specific Purposes (ESP) is not General English (GE) teaching and learning, but it is specialized English. It has been growing as a distinct discipline since 1960s. ESP is focused-English learning and teaching situation in which teaching methods and learning environment are different from General English. important difference between ESP and GE (General English) is that the learners and their purposes for learning English. ESP learners are usually adults who already have some acquaintance with English and learn the language so as to communicate a set of professional skills and to perform particular profession-related activities. An ESP course is therefore developed based on an assessment of purposes and needs and the activities for which English is needed. ESP centers more on language in context than on teaching grammar and language structures. It covers subjects varying from Business or Medical Sciences to Tourism and Hospitality Management. The ESP crucial point is that English is not taught as a subject separated from the learners' real world (or wishes); instead, it is integrated into a subject matter area important to the learners. However, GE (General English) and ESP differ not only in the nature of the learners, but also in the aim of instruction. In fact, in General English teaching, all four-language skills; listening, reading, speaking, and writing, are stressed equally. However, in ESP it is a needs analysis that determines which language skills are most needed by the learners, and the syllabus is designed accordingly. For example, an ESP program might emphasize the development of writing skills in students who are preparing for graduate work in Business Administration. An ESP program might promote the development of spoken skills in students who are studying English in order to become tourist guides. ESP has traditionally been divided into two classified main branches such as English for Academic Purposes or EAP and English for Occupational

Purposes or EOP. EAP (English for Academic Purposes) refers to any English teaching that relates to academic study needs. Dudley-Evans & St John argue that in the area of EAP, English for Science and Technology (EST) has been identified as the focal area, but English for Medical Purposes (EMP) and English for Legal Purposes (ELP) have always gained their places. More recently, English for Management, Finance, and Economics (EMFE) has increasingly been important to Master of Business Administration (MBA) courses. According to Robinson, P. [4, p21) “The most independent ESP learner’s productivity task, it involves learning the correct vocabulary, the grammatical rules, the phonetics of the new language, and also the pragmatic guidelines that dictate how those signs are to be used. ESP educator is there to guide or even teach the student how to adapt their existing skills, those acquired in the, how to think critically and how to use creativity to find solutions. So now the object is not to teach the student writing skills, for example, they already have these, but to understand the skills they possess and refine them in a manner way in the specific context, academia, business, medical, etc. Dudley-Evans & St John [provide their definition of ESP. They also use absolute and variable characteristics of ESP as Stevens centers on defining ESP. Absolute characteristics: 1. ESP is designed to meet specific needs of the learner; then one of the most important characteristics is that learning ESP needs learners -centered which means independent learning, that focuses on learners. Independent language learning is also referred to as autonomous learning, self-directed learning, independent study and self-regulated learning (Morrison, 2011). In this approach, learners develop an awareness of their strengths and weaknesses by interacting with their environment (e.g., teacher feedback, group activities). This awareness allows learners to set learning goals, identify learning needs and evaluating their own progress (Morrison, 2011). As we move towards a more learner-centered classroom practice, independent language learning acknowledges and takes into consideration individual learner’s needs and rights (White, 2008) One of the ways to promote independent language learning is to guide

learners in setting relevant and realistic learning goals. Because learning is a dynamic process, learners should revisit their goals from time to time. If learners' needs have evolved, they can modify their goals. This process can involve learners reflecting on and discussing their progress and new goals with their teachers. The problem of the present study was that first year at the faculty of the physiotherapy, Egyptian Chinese university are weak in their independent academic language learning skills, so the research made an attempt to investigate the effectiveness of web research-based instruction to foster physiotherapy students' independent academic language learning skills. Therefore, the aim of this study is to determine the impact of web research-based English language instruction; in enhancing physiotherapy students' independent academic language learning skills. this study was conducted on Egyptian Chinese University Physiotherapy Students through a quantitative design with a large number of participants, first year physiotherapy students (English for academic purpose).

2-Literature Review

2.1. Web Research-Based English Language Instruction:

There are an estimated 3.8 billion global internet users (Internet World Stats, 2017), and 2.3 billion smartphone users (Statistica, 2018). China, the US, South Korea, Japan, and Brazil account for 65% of a \$2.8 billion global demand for digital English learning products (Adkins, 2016). Web-based Language Learning (WBLL) tools and resources are used autonomously by millions of English language learners, but are also prescribed by their teachers as part of a wide range of CALL-EJ, 19(2), 125-138 126 motivational and effective blended learning curricula (e.g. Bañados, 2006; Miyazoe & Anderson, 2010; Shih, 2011). while supporting the development of all four language skills including listening, reading, speaking and writing (Ghanizadeh et al., 2015). Also, integrating digital technologies into classroom settings can lead to increased student motivation and interest in learning (Golonka et al., 2012), as well as improved self-regulation

and collaboration (Warni et al., 2018). Digital technologies have profound implications for language teaching given that much of students' use of language outside the classroom is mediated through digital technologies (Sauro & Chapelle, 2017), and accordingly, students should be able to use digital technologies to support their social practices through language learning processes (Kessler, 2018). Language educators must therefore pay attention to and feel confident in embracing innovation by embedding digital technologies in students' learning (Xiao, 2019). The issue of adopting digital technologies in the classroom, specifically in an online learning environment, becomes more urgent in the context of COVID. Thus, the aim of this study is to determine the impact of web research-based English language instruction, Egyptian Chinese university Physiotherapy students' in enhancing their independent academic language learning skills.

2.2. Internet and English for Specific Purposes:

The history of computerization in second language studies started in the last decades of the 20th century and got the name of CALL (Computer Assisted Language Learning). Egbert (2005:4) defined CALL as learning languages in whatever context with the aid of computer technologies. ICT (information communication technology) plays a significant role in blended learning. It employs variety of effective and interactive tools such as online whiteboard, chat system, online conference and discussion forum. The ICT tools improve both teaching and learning process. Blended learning inculcates both teacher and student to acquire their learning as "recorded group discussions "Using virtual learning environment, Virtual learning environment module, improving presentation skills with PowerPoint Padlet is internet-enabled device, including: PC, laptop, tablet, smartphone. There is no software require to download Padlet. Students can then share their works on Facebook, Google+, e-mail or even insert the URL into their blog (Wood, 2016). It is a virtual notice board, which is used in variety of ways to learn English. Padlet is an application to create an online bulletin board which displays information for any topic. The teachers can add images, links, a video. Unlike a normal notice-boards,

Padlet permits students to post stickies with multimedia elements. Teachers and students can also export "the digital wall" they created in a variety of formats including pdf, image, etc. and share it through social media sites. Journal of Shanghai Jiaotong University Volume 16, Issue 8, August - 2020 ISSN:1007-1172 <https://shjtdxxb-e.cn/> Page No: 710 In Padlet, Students can record their ideas and opinions on a given topic in the lesson. Teachers can use Padlet as a communication platform like an LMS and can post all their announcements, lecture notes, videos etc. Students can create a storyboard including dialogues and images by working in groups. Teachers can create a wall based on a theme (environment, food, sports etc.) and students can create a wall including images, videos, sounds and texts on the given theme. Teachers can use Padlet as a communication platform like an LMS and can post all their announcements, lecture notes, videos etc. Students can create a storyboard including dialogues and images by working in groups. They can also collect ideas for exploration. Virtual wall-Padlet

BLOG A blog (short for weblog) is an updated website that looks like an online journal. It requires only basic access to the Internet and one of the easiest ways to publish student writing. Blogging becomes communicative and interactive when participants assume multiple roles in the writing process. Writers write and post, as readers/reviewers who respond to other writers' posts and take it as an interactive forum. Historically, a weblog, or 'blog', is regularly updated, time and date stamped posts, running down the computer screen in chronologically reverse order (i.e. latest to the last). Crucially, there is an 'Add Comment' feature so that readers of posts can leave their opinions, questions or thoughts. Finally, Journal of Shanghai Jiaotong University Volume 16, Issue 8, August - 2020 ISSN:1007-1172 <https://shjtdxxb-e.cn/> Page No: 711 there is a writing style element: blogs are written by one individual who gives his or her thoughts in a generally relaxed, 'spoken' style (McIntosh (2005) Types of blogs used in language teaching. Campbell (2003) has outlined three types of blogs for use with language classes: a. The Tutor Blog is run by the teacher of a

class. The content of this type of blog can be limited to syllabus, course information, homework, assignments, etc. Or the teacher may choose to write about his or her life, sharing reflections about the local culture, target culture and language to stimulate online and in-class discussion. In this type of blog, students are normally restricted to being able to write comments to the teacher's posts.. The Class Blog is a shared space, with teacher and students being able to write to the main area. It is best used as a collaborative discussion space, an extension of the classroom. . The Learner Blog is the third type of blog and it requires more time and effort from the teacher to both set up and moderate, but is probably the most rewarding. It involves giving each student an individual blog. The benefit of this is that this becomes the student's own personal online space. Students can be encouraged to write frequently about what interests them, and can post comments on other students' blogs. The uses of blog: provide extra reading practice for students. o online student learner journals that can be read by their peers. guide students to online resources appropriate for their level' o increase the sense of community in a class o encourage shy students to participate. o stimulate out-of-class discussion o encourage a process-writing approach. o online portfolio of student written work o help build a closer relationship between students in large classes. Journal of Shanghai Jiaotong University Volume 16, Issue 8, August - 2020 ISSN:1007-1172 <https://shjtdxxb-e.cn/> Page No: 712.

2.3. Web-Research based Instruction Tools:

The various applications of internet technology have developed a new field for independent English language learning which is becoming more and more popular at home and abroad. Some sites provide large amount of English language learning and information, such as listening, speaking, reading, writing, grammar, testing, and background knowledge. That information, including some audio and visual information can be downloaded. Skype and Google+ are among the perfect tools used for learning and practicing languages. You can practice with native speakers or language learners that you know on social networking sites. Facebook, Google Chrome as well as Twitter also have many pages which are designed for teaching English and

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have many activities in all skills of English. Also Telegram with its revolution in Internet application has many channels that improve skills for all levels with amazing ways. You can find the channels and just get subscribed and the latest updates and information will come to you every day. Apart from providing you with an online dictionary, Instant Translators can also translate any text on a translated page without moving away from that webpage. Mainly, Web technologies were argued to be meant for the ease of use of internet, content creation tools, and of the wider availability of free applications available online on the web (Coutinho & Bottentuit Jr, 2010). According to Buchem and Hamelmann (2011), web tool offers a wide range of enhance 21st century skills such as creativity, critical thinking, collaboration, communication and digital literacy, focused on managing the data, and explicit knowledge and information, whereas the focus, moved towards tools and methods for developing implicit knowledge that was derived from global participation and social interaction (Miranda et al., 2014). Web tools expand the new ways of communication, interaction, cooperation, collaboration among learners by providing them increased ease of use in storing their data, creating their online pages, and in creating their online communities (Coutinho & Bottentuit Jr, 2010). Using these tools, learners can publish and share the data and content with their academic fellows, integrate various social software in their learning, and create the content. Web tools increased the possibilities of interaction, deepened the bond among the community members and encouraged learners for sharing and collaborating (Martinez, 2003). It made learners more active, critical and creative by enabling them to produce the content. Silva, Mahfujur Rahman, and El Saddik (2008) state that web tools promote better student-teacher relation and interaction leading to friendly environment, helps learners feel more comfortable by being self-expressive, guide them through tools which stimulate their enthusiasm in forming their opinions, and develop their intervention and self-confidence. It also fosters student-student interaction empowering them with a feeling of being a member of

learning community (Liou & Peng, 2009). Another benefit of web tools was that it provided learners an easy to access and easy to use online applications which enhanced learners' familiarity with the e-learning technology creating the learning environment user-friendly.

2.3. A. Blogs

Blogs are among the primary web tools used in higher educational institutes. In 1990s, most of the teachers, students and researcher used weblogs (the term used for web blogs). Blogs are internet-based journals used by millions of users (Rennie & Morrison, 2013). This is a website where a user can produce an, continually updated diary-like presentation of information, which can be responded to asynchronously by readers and members of the blog's community. They are "straightforward content management tools primarily used to build diaries or websites around some theme or subject area" (Benson & Avery, 2009). Blogs allow foreign language learners to create and develop learning communities and world-wide audience and provide multiple opportunities for them to engage in meaningful and authentic discussions (Downes, 2009).

2.3. B. Wikis

Ward Cunningham, in 1998, invented Wikis which brought the breakthrough in the field of e-learning. It is a "system that allows one or more people to build up a corpus of knowledge in a set of interlinked web pages, using a process of creating and editing pages" (Franklin & Harmelen, 2007). Wiki is the web 2.0 social software developed for easy communication and collaboration in which users could easily create, edit, track, revise, and monitor contributions (Weller, 2020). The difference between weblog and Wiki is that weblogs are used for personal information and Wikis lead to the collaborative work. As a web tool, it allows learners to create, share and disseminate the information. This tool is implacable to not in English writing class but any skill-based class where learners can work collaboratively on a group project. Web tool facilitates them in collaborating with each other, having dynamic interaction with their teachers and fellows, sharing knowledge in a learning community (Qian, 2007). Jee (2011) sees wikis as one of the most useful tools particularly in foreign

language course as he found them “a very good tool for collaboration or collaborative writing in a foreign language classroom” (p.167). Duffy and Bruns (2006) enlist various educational benefits of wikis that include creating summaries, building annotated bibliographies and also using it as a presentation tool. Moreover, “one obvious benefit of technology for language learning is the creation of opportunities for students to use language in authentic contexts. Such activities encourage students to strive for autonomy in the target language” (p.79). Other advantages of using wikis include facilitating.

2.3.C. Podcasts

The term podcasting is the collocation of two words i.e., Apple computer's portable media player and broadcasting. “A podcast is an audio file which can be downloaded and Journal of Humanities and Social Sciences, 10(2), 2022 817 listened to either on an iPod or MP3 player for mobile study or a computer or laptop for location-based study” (Rennie & Morrison, 2013). They further explain that learners may also integrate video podcasts while using PowerPoint slides. This tool makes students active learners rather than passive receivers of information. Using podcast as an e-learning tool, learners can listen to the target language content multiple times.

2.3. D. Social media and Social Networking

According to Gunn (2013), “education is on the brink of a revolution fueled by social media and social networking tools that are changing the ways people communicate, and knowledge is created, managed and shared” (p. 170). By using social media in e-learning, student have transformed their ways of learning as they are no more consumers of knowledge delivered to them rather, they have become creators of knowledge. This involves them learning foreign language effectively by engaged with their peers, teachers, virtual worlds and by authentic experiences. This might be the reason that the use of social media began to increase rapidly in the field of learning and teaching (Latif, Hussain, Saeed, Qureshi, & Maqsood, 2019). These are virtual platforms available to users for connecting and networking. These

social networking sites aim to create social rapport, develop peer e-learning environment, and to conduct commonly shared activities (e.g., virtual conferences, webinars, etc.). It allows learners to create their profiles, join their classroom and institute pages, form discussion groups, share notes, blogs and to upload photographs, videos, documents and other learning materials (Oradini & Saunders, 2008; Rennie & Morrison, 2013). Therefore, it made strong connectivity among learners, teachers and thus created the dynamic process of learning. English language teachers and learners used social media to disseminate the knowledge and information, announce the tasks and assignments, communicating to their peers for classroom projects in their target language, negotiating deadlines, etc. (Kara et al., 2020; Raspopovic, Cvetanovic, Medan, & Ljubojevic, 2017)..

2.4. Independent Learning

Independent learning is a broad concept Mayer et al. (2008). He defined self-regulated learning as independent learning that highly effective approaches to learning are associated with success in and beyond school. It also cites Candy (1991), who suggests that independent learning is a method and educational philosophy in which learners acquire knowledge by themselves and develop the ability to undertake inquiry and critical reflection. In support of these definitions, there is a consensus in the international literature that independent learning is a process during which learners develop the values, attitudes, knowledge, and skills needed to make responsible decisions and take appropriate actions regarding their learning (Bates and Wilson, 2002). Independent learning is learning in which the learner, in conjunction with relevant others, can make the necessary decisions to meet the learner's learning needs (Kesten, 1987). There is a consensus that independent learning is fostered by creating opportunities and experiences that encourage learners' motivation, curiosity, self-confidence, and self-reliance. It is based on the understanding by learners of their interests and valuing learning for its own sake. The terms independence and autonomy are often used in the same context to mean the same thing. Finch (2002) stated that autonomy meant different things to different people, and provided definitions that

referred to the situation where learners are on their own, and skills used for self-directed learning. Lee (1998) said that autonomy involves learners taking responsibility for their learning, including monitoring, and assessing their own work. Moore (1972) put forward that a truly autonomous learner is self-aware, understands that there is a variety of options to achieve his language goals, and knows where to seek help to reach his goals. Furthermore, the scope of learner autonomy extends to English proficiency (Deng (2007) saw a positive relationship between learner autonomy and English proficiency), as well as motivation (Spratt, Humphreys and Chan (2002) concluded that motivation is a major factor that influences learner becoming autonomous). For the purpose of this study, independent learning means any work which students do to improve their English ability, where the work is done outside of class time and is not assigned by a teacher. Egel (2009) states independent learning activities support the development of person into lifelong learners. If someone is given many opportunities to study independently, then he also has the opportunity to develop the skills needed by becoming lifelong learners. However, this opportunity certainly must be supported by the willingness of individuals to carry out these independent learning activities. Jarvis (2007) and Weinstein et al. (2011) state that the ability to continue to learn and become lifelong learners will make individuals are not left behind by the times and will still be able to be part of the world community. Along with the demands above, Indonesian education curriculum is also intended to be able to create students who are more independent and creative. The concept of learning is introduced in the classroom and also ultimately refers to the creation of independent learning activities. In general, the concept of independent learning has an appeal that is for several reasons. The reasons which are most cited are the reasons presented by Crabbe (1993) that connect students' independence with their rights. According to Crabbe, every individual has learning needs, which of course must be fulfilled because the fulfillment of learning needs becomes an individual right. Thus they can learn things they like and want. In this

context, individual rights can be fulfilled if the teacher is willing to involve students and give them freedom in choosing the material to be studied, strategies in learning, learning activities to be carried out in class, teaching materials, methods, evaluation of student learning outcomes, place and time right learning. However, giving this freedom must also consider aspects of the students' abilities and their learning needs. Another reason that is often associated with the importance of independent learning activities is presented by Little (2009). Little underlines the superiority of independent learning activities in terms of effectiveness and efficiency. Little states that independent students can learn independently outside the classroom. Indeed, independent students will not be completely dependent on the teacher figure in their learning. So when they want to study they will not hesitate to do it even though they are not in school. Independent students will use the knowledge they get in class to help them learn new things they encounter outside the classroom.

2.4.A. Independent Learning Skills

Independent learning is a method or learning process where learners have ownership and control of their learning – they learn by their own actions and direct, regulate, and assess their own learning. The independent learner is able to set goals, make choices, and decisions about how to meet his learning needs, take responsibility for constructing and carrying out his own learning, monitor his progress toward achieving his learning goals, and self-assess the learning outcomes. The process of independent learning enhances students' motivation because they are active participants in controlling their learning. Independent learning strategies allow students to select the materials they wish to present and to develop appropriate presentation formats to demonstrate their learning – for example, portfolios and response journals. Independent learning provides students with opportunities for self-reflection – thinking about their own learning and evaluating and revising the material before submitting or presenting their work. Independent learning strategies work well with the processes of inquiry and research, as students learn to use a variety of research methods and learning resources, structure their research

questions, and pursue areas of investigation. The development of logical frameworks and information-seeking strategies involves skills that are transferable to all subjects as well as areas of personal interest. Students who develop independent, creative, and critical problem-solving skills can apply those skills to meet current curriculum expectations and will use them in real-life situations throughout their lives. Independent language learning can refer to a context or setting for language learning (Benson & Voller, 1997; Wright, 2005) in which learners develop skills in the TL often, though not always, individually. The emphasis here is on independence from the mediating presence of a teacher during the course of learning. In addition, the degree of freedom learners have to make choices (Anderson & Garrison, 1998), to select learning opportunities and to use resources according to need is highlighted. Self-access learning (Gardner, 2007), distance learning (White, 2007) and language advising (Gremmo & Castillo, represent ways of organizing learning aligned to this interpretation, each of which has its own strong tradition in cultures as diverse as those of Scandinavia, the People's Republic of China, New Zealand and France. A second dimension of independent language learning refers to a philosophy or approach to learning which aims to develop and foster independence in learners, who may or may not be in independent learning settings. Dickinson (1994), for example, argues that the most effective way of developing favorable attitudes towards independence is for teachers to prepare language learners to think about their needs and objectives and then to learn how to structure their learning. From another perspective, Candy (1991) argues that independent learning can be both a goal and a process and that the two are intertwined. Paul (1990: 37) captures both goal and process aspects suggesting that the most important criterion for success in distance education should relate to learner independence and that 'the ultimate challenge ... is to develop each individual's capacity to look after his or her own learning needs'. This approach, promoting learner independence, has been highly influential within the learner autonomy movement (Benson, 2001). I

shall shortly return to examining the relationship between learner autonomy and learner independence. The third dimension of ILL refers to learner attributes and skills which can be acquired and used in self-directed learning, and it is here that the link with strategies and strategy instruction is most commonly drawn; independence involves developing the attitudes, beliefs, knowledge and strategies needed by learners to take actions dealing with their own learning. Independent learning in this sense is based on students' understanding of their own needs and interests and is fostered by creating the opportunities and experiences which encourage student choice and self-reliance and which promote the development of learning strategies and metacognitive knowledge. According to the researcher, the independent language learning can be as follows: Self-planning, Self-management, and Self-assessment.

3-Problem identification

3.1. Purpose of the Study

The purpose of the study was to investigate the effectiveness of web research-based instruction to foster physiotherapy students' independent academic language learning skills.

3.2. Objectives of the Study

- 1- Enhancing and promoting first year, physiotherapy students' independent academic language learning s skills.
- 2-Developing web research-based instruction to foster physiotherapy students' independent academic language learning skills

3.3. Statement of the Problem

The problem of the present study was that first year at the faculty of the physiotherapy, Egyptian Chinese university are weak in their independent academic language learning skills, so the research made an attempt to investigate the effectiveness of web research-based instruction to foster physiotherapy students' independent academic language learning skills., so the following main questions was tried:

- What is the effectiveness of web research-based instruction to foster physiotherapy students' independent academic language learning skills?

This question can be divided into the following sub questions:

- 1- What is the web research-based instruction needed for physiotherapy students 'to foster their academic speaking skills?
- 2- What are the independent academic language learning skills needed for physiotherapy students?
- 3-How far do ESP physiotherapy students acquire their independent academic language learning skills?
- 4- What is the effect of web research-based instruction to foster physiotherapy students' independent academic language learning skills?

3.4. Limitations of the Study

The present research limits first year students', ESP students, Faculty of physiotherapy, Egyptian Chinese University. Students were assigned to two groups randomly; one group was considered as an experimental group and the other one is considered a control group. each group consisted of 100 students.

4-Methodology

4.1. Research Design

This study was conducted quantitatively to collect data from a large number of participants. For this current study which includes 100 participants, participants in this current study: ESP students, Faculty of physiotherapy, Egyptian Chinese University. Students were assigned to two groups randomly; one group was considered as an experimental group and the other one is considered as a control group. each group consisted of 100 students.

4.2. Research Tools and Data collection Procedures

Research tools which are used to collect data can be considered as follows:

- 1- Needs Analysis Independent Academic English Language Learning Skills Questionnaire. (Appendix 2).
- 2- Independent Academic English Language learning Pre-Post Test. (Appendix 3).

4.3. Instrument and Experiment

The study had a pre -post groups design. An experimental and a control group were pre- posttests “pre and post independent academic English language learning skills test”. The experimental group was instructed and trained in an ESP web-based English language, task -based instruction while the control group received no such training. Pre needs analysis independent academic English language learning skills questionnaire was used to measure the students’ selected independent language learning skills which are needed for their academic life to be instructed through web-research based English language instruction.

4.4. Needs analysis Independent Academic English Language Learning Skills Questionnaire. :(Appendix 2)

4.4.A The Objective

The questionnaire was designed for the purpose of:

- Surveying the physiotherapy students’ needs for the most needed academic independent academic English language learning skills

4.4.B. Design

In order to design the questionnaire, the researcher did the following:

- Reviewing the ESP literature that focused on English for academic purposes web research based -instruction.
- Reviewing the previous studies that already developed the independent language learning skills for academic purposes.

4.4.C Validity

The questionnaire was validated by jury members (appendix 1), English language professors and instructors who are specialized in English methodology and ESP COURSE design. Based on the jury members’ recommendation, the researcher made the suggested changes and modification to reach to its final form.

Validity of Needs Analysis Independent Academic English Language Learning Skills Questionnaire:

To ensure the validity of the questionnaire, the researcher presented it to jury of experts form field of curriculum and teaching methods, Appendix No. (1); In order to explore their opinions about the validity of this questionnaire, the researcher asked them to express their

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opinion on the questionnaire in terms of the suitability of the skills for what they were developed for, and the extent of the students' needs for them, in addition to determining the extent of their suitability to the level of the students of the research sample, and the clarity of its linguistic formulation, as well as adding, deleting, or Reframing what they see as skills.

Reliability of Needs Analysis Independent Academic English Language Learning Skills Questionnaire:

To verify the reliability of the questionnaire, the researcher used the Cooper equation to calculate the percentage of agreement between the arbitrators. The percentage of agreement between the arbitrators was (90.77%), meaning the reliability value was (0.908); this indicates a high reliability rate for the questionnaire, and also confirms its validity for application to the students in the research sample.

Results of Needs Analysis Independent Academic English Language Learning Skills Questionnaire:

The researcher calculated the percentage of agreement among students on the questionnaire. This is to determine the extent of students' need for independent academic English language learning skills, which is evident in the following table (1):

Table (1)

Percentage of Agreement between students on Needs Analysis Independent Academic English Language Learning Skills Questionnaire (N=100)

Needs	Percentage of Agreement	Ranking
1. Self-planning skill in learning English through web research-based instruction.	78.00%	3
2. Self-planning skill in determining physiotherapy cognitive information.	70.00%	7
3. Strategy awareness skill for language communicative tasks.	85.00%	1
4. Linguistic awareness skill for creating learning strategies.	80.00%	2

Needs	Percentage of Agreement	Ranking
5. Managing English tasks through cognitive online resources.	74.00%	5
6. Self-strategy management skills using task-based instruction.	68.00%	8
7. Monitoring progress through linguistic portfolios.	65.00%	9
8. Comparing target goals before and during the learning process.	72.00%	6
9. Peer-assessment for identifying weaknesses.	60.00%	11
10. Using flashcards to assess progress.	55.00%	13
11. Using portfolios to assess progress.	62.00%	10
12. Assessing cognitive and linguistic goals after tasks.	75.00%	4
13. Assessing personal learning strategies for improvement.	58.00%	12

It is clear from the results of the previous table (1) that:

The skills agreed to be needed by students were maintained at a rate of (80.00%) and more, and the following is an explanation of those skills:

- **First Rank:** the skill of **strategy awareness skill for language communicative tasks** came in first rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (85.00%).
- **Second Rank:** the skill of **linguistic awareness skill for creating learning strategies** came in Second rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (80.00%).
- **Third Rank:** the skill of **self-planning skill in learning English through web research-based instruction** came in third rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (78.00%).

- **Fourth Rank:** the skill of assessing **cognitive and linguistic goals after tasks** came in fourth rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (75.00%).
- **Fifth Rank:** the skill of managing **English tasks through cognitive online resources** came in fifth rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (74.00%).
- **Sixth Rank:** the skill of comparing **target goals before and during the learning process** came in sixth rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (72.00%).
- **Seventh Rank:** the skill of **self-planning skill in determining physiotherapy cognitive information** came in seventh rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (70.00%).
- **Eighth Rank:** the skill of **self-strategy management skills using task-based instruction** came in eighth rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (68.00%).
- **Ninth Rank:** the skill of **monitoring progress through linguistic portfolios** came in ninth rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (65.00%).
- **Tenth Rank:** the skill of using **portfolios to assess progress** came in tenth rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (62.00%).
- **Eleventh Rank:** the skill of **peer-assessment for identifying weaknesses** came in eleventh rank in the independent academic

- English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (60.00%).
- **Twelfth Rank:** the skill of assessing **personal learning strategies for improvement** came in twelfth rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (58.00%).
 - **Thirteenth Rank:** the skill of using **flashcards to assess progress** came in thirteenth rank in the independent academic English language learning skills questionnaire; the percentage of students' agreement on their need for it reached (55.00%).
 - **This result can be illustrated by the following figure (1):**

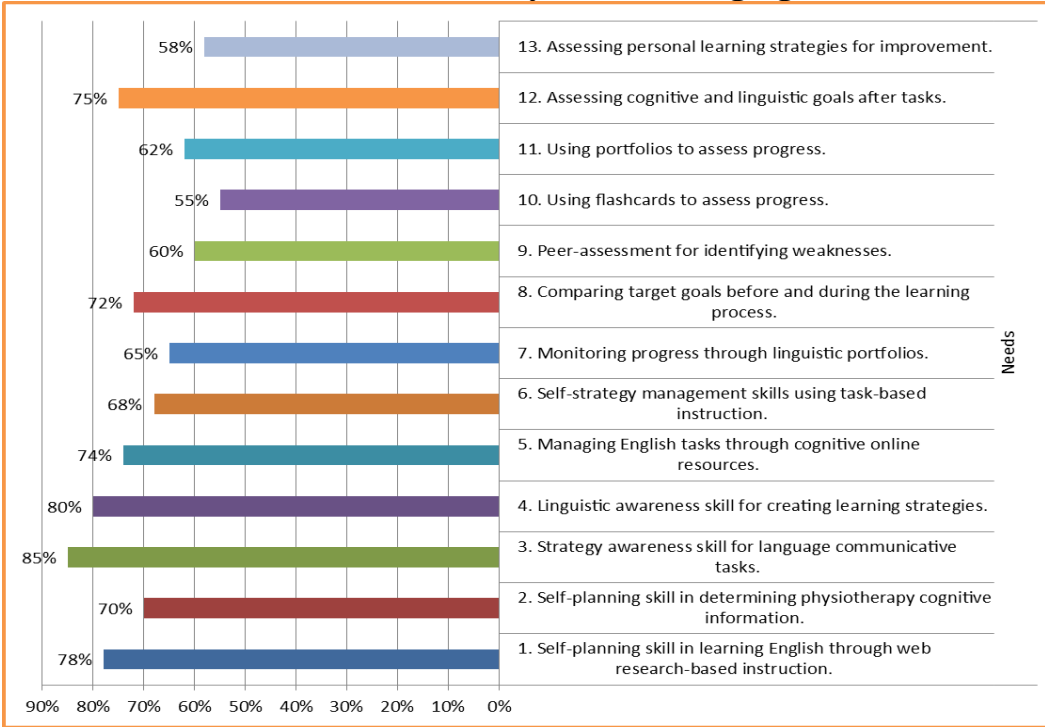


Figure (1)

**A graph showing of agreement percentage between students
On needs analysis independent academic English language learning
skills questionnaire**

4.4.D. Administration

The questionnaire was administrated to the first year, physiotherapy students' Egyptian Chinese university, through Microsoft teams (online), to be filled calculated online, the researcher explained the purpose of the questionnaire.

4.4.E. Description

The questionnaire consists of 13 items representing the target independent language learning skills "self-planning, self-management, self-assessment "cognitive, linguistics, metacognitive, professional. There are two fields to determine the degree of the needs of the students (yes-no). Independent self -planning skills are measured through questions number 1-2-3-4

Independent self-management skills are measured through questions number 5-6-7-8-2

Independent self -assessments skills are measured through questions number 9-10-11-12 -13. Every skill is measured through 4 questions every question is out of ten marks, so, the total questions are out of 120 marks.

4.5 -Academic English Language learning skills pre- posttest (Appendix 3).

4.5. A The objective

The s test was designed for the purpose of:

-Surveying the physiotherapy students' acquisition *for* their academic four language skills (speaking skills, writing, listening and reading skills).

4.5.B Design

In order to design the test, the researcher did the following:

-Reviewing the ESP literature that focused on English for academic four language skills (speaking skills, writing, listening and reading skills).

test.

-Reviewing the previous studies for designing web research -based independent learning and instruction that already developed the four language skills (speaking skills, writing ,listening and reading skills).

4.5. C Validity

The test was validated by jury members (appendix 1), English language professors and instructors who are specialized in English methodology and Esp course design. Based on the jury members' recommendation, the researcher made the suggested changes and modification to reach to its final form.

Psychometric Properties of Academic English Language learning Reading Skills Test for students in the faculty of Physical Therapy:

The researcher verified the availability of the psychometric Properties (validity, reliability, coefficient of difficulty and ease, discrimination coefficient) of the test as follows:

First: Validity

In this research, the researcher relied on the validity of the jury members to emphasize the validity of the content, also the internal consistency, and Intrinsic Validity, the following is an explanation for this:

A.Content validity:

The researcher presented the test in its initial on jury of experts form field of curriculum and teaching methods to express their opinions on the appropriateness of items of the test, Based on the viewpoints agreed upon by the jury members, the researcher has done the modifications agreed upon by the jury of experts (80.00% and more). Cooper's equation has been used to calculate the percentage of agreement among the jury members.

The rate of agreement among the jurors on skills of test ranged between (80.00% - 100.00%), as the percentage of agreement on the test as a whole reached (92.80%), which is a high percentage indicating the validity of the test, after making the modifications approved by the jury members, which included an amendment to the formulation of some of the questions of the test, The researcher made the modifications referred to by the jury members, which included modifying the wording of test.

B.Internal consistency validity:

Internal consistency was calculated through the application of the test on (50) student during the pilot study as follows:

Calculation of the correlation coefficients among the test items and total test as follows:

Table (2)

Correlation coefficients between Items of reading skills test and total test (N=50)

Items	Correlation Coefficient	Items	Correlation Coefficient	Items	Correlation Coefficient
1	0.380**	10	0.829**	19	0.811**
2	0.327*	11	0.366**	20	0.777**
3	0.805**	12	0.458**	21	0.740**
4	0.811**	13	0.319*	22	0.829**
5	0.745**	14	0.326*	23	0.801**
6	0.455**	15	0.809**	24	0.785**
7	0.301*	16	0.770**	25	0.708**
8	0.800**	17	0.805**		
9	0.688**	18	0.809**		

* Correlation is significant at the at level (0.05)

** Correlation is significant at the at level (0.01)

The previous table (2) shows the correlation coefficients between the total test and items of the test have ranged between (0.301) and (0.829), all of which are a statistical significant at the level of (0.05) and level of (0.01); this indicates the correlation and coherence of the test items, and the test as a whole, which indicates that the test It has internal consistency.

C.Intrinsic Validity

Intrinsic validity of the test was also obtained by using the following formula:

$$\text{Intrinsic validity} = \sqrt{\text{Reliability item}}$$

$$\text{Intrinsic validity} = \sqrt{0.847} = 0.920$$

$$\text{Intrinsic validity} = 0.920$$

Intrinsic validity equal (0.92); which confirms that the test is validity.

Second: Reliability

The reliability of the test was calculated in a number of ways, the Cronbach's Alpha, and Test-retest, as follows:

A.Cronbach's Alpha: The researcher used this method to calculate the reliability of the test by applying it to a sample of (50) student. The Cronbach's Alpha coefficients for the value of the Cronbach's Alpha for the overall test was (0.847) .

Table (3)

Results of the reliability coefficient values

For the Academic English Language learning Reading Skills Test

Test	Number of items	Cronbach's Alpha Coefficient
The test as a whole	25	0.847

These values indicate that the test has an appropriate degree of reliability.

B. Test-Retest: this study assessed the reliability of reading skills test using a test-retest approach. A pilot sample of (50) students completed the test, and retook it (20) days later. The resulting reliability coefficient ($r=0.870$) demonstrated high test reliability.

These values indicate that the test has an appropriate degree of reliability, and this means that the values are appropriate to be reliable and indicate the validity of the test for application.

Third: The Difficulty Coefficient Calculation

The researcher calculated the difficulty coefficient of the items of test. The following table shows the difficulty coefficient of the items as follows:

Table (4)

Values of difficulty coefficient of the reading skills test

Items	Coefficients of difficulty	Items	Coefficients of difficulty	Items	Coefficients of difficulty
1	0.50	10	0.51	19	0.49
2	0.52	11	0.53	20	0.52
3	0.50	12	0.50	21	0.50
4	0.50	13	0.50	22	0.53
5	0.53	14	0.48	23	0.49

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Items	Coefficients of difficulty	Items	Coefficients of difficulty	Items	Coefficients of difficulty
6	0.53	15	0.50	24	0.48
7	0.50	16	0.53	25	0.51
8	0.49	17	0.51		
9	0.48	18	0.49		

It is clear from the previous table (4) that the difficulty coefficients ranged between (0.48 - 0.53), which are good difficulty coefficients, and the difficulty coefficient for the test as a whole was (0.50). These results indicate the validity of the test for use.

Fourth: Discrimination Coefficient Calculation

The discrimination is the test's ability to discriminate between the high- ability students and low-ability students. The following table shows the discrimination coefficients of the test:

Table (5)

Values of discrimination coefficients of the reading skills test

Items	Discrimination Coefficients	Items	Discrimination Coefficients	Items	Discrimination Coefficients
1	0.66	10	0.70	19	0.63
2	0.70	11	0.73	20	0.65
3	0.72	12	0.69	21	0.60
4	0.62	13	0.72	22	0.72
5	0.69	14	0.74	23	0.74
6	0.67	15	0.70	24	0.71
7	0.60	16	0.70	25	0.68
8	0.75	17	0.69		
9	0.75	18	0.70		

From the previous table (5), it is found that the values ranged from (0.60 to 0.75) , which are acceptable values and indicate the ability of the test to distinguish between the students. Then the test became in its final form after the adjustments. The test as a whole discrimination coefficient was (0.69). These results indicate the validity of the test for use.

By verifying the psychometric properties of the reading skills test, it was confirmed that the test is reliable for application to the main sample of students from the faculty of Physical Therapy.

Psychometric Properties of Academic English Language learning Writing Skills Test for students in the faculty of Physical Therapy :

The researcher verified the availability of the psychometric Properties (validity, reliability, coefficient of difficulty and ease, discrimination coefficient) of the test as follows:

First : Validity

In this research, the researcher relied on the validity of the jury members to emphasize the validity of the content, also the internal consistency, and Intrinsic Validity, The following is an explanation for this:

A.Content validity :

The researcher presented the test in its initial on jury of experts form field of curriculum and teaching methods to express their opinions on the appropriateness of items of the test, Based on the viewpoints agreed upon by the jury members, the researcher has done the modifications agreed upon by the jury of experts (80.00% and more). Cooper's equation has been used to calculate the percentage of agreement among the jury members.

The rate of agreement among the jurors on skills of test ranged between (80.00% - 100.00%), as the percentage of agreement on the test as a whole reached (92.00%), which is a high percentage indicating the validity of the test, after making the modifications approved by the jury members, which included an amendment to the formulation of some of the questions of the test, The researcher made the modifications referred to by the jury members, which included modifying the wording of test.

B.Internal consistency validity:

Internal consistency was calculated through the application of the test on (50) student during the pilot study as follows:

Calculation of the correlation coefficients among the test items and total test as follows:

Table (6)

Correlation coefficients between Items of writing skills test and total test

(N=50)

Items	Correlation Coefficient	Items	Correlation Coefficient	Items	Correlation Coefficient
1	0.700**	3	0.849**	5	0.680**
2	0.830**	4	0.783**		

**** Correlation is significant at the at level (0.01)**

The previous table (6) shows the correlation coefficients between the total test and items of the test have ranged between (0.680) and (0.849), all of which are a statistical significant at the level of (0.01); this indicates the correlation and coherence of the test items, and the test as a whole, which indicates that the test It has internal consistency.

C.Intrinsic Validity

Intrinsic validity of the test was also obtained by using the following formula:

$$\text{Intrinsic validity} = \sqrt{\text{Reliability item}}$$

$$\text{Intrinsic validity} = \sqrt{0.830} = 0.911$$

$$\text{Intrinsic validity} = 0.911$$

Intrinsic validity equal (0.91); which confirms that the test is validity.

Second: Reliability

The reliability of the test was calculated in a number of ways, the Cronbach's Alpha, and Test-retest, as follows:

A.Cronbach's Alpha: The researcher used this method to calculate the reliability of the test by applying it to a sample of (50) student. The Cronbach's Alpha coefficients for the value of the Cronbach's Alpha for the overall test was (0.830) .

Table (7)**Results of the reliability coefficient values****For the Academic English Language Learning Writing Skills Test**

Test	Number of items	Cronbach's Alpha Coefficient
The test as a whole	5	0.830

These values indicate that the test has an appropriate degree of reliability.

B.Test-Retest: this study assessed the reliability of writing skills test using a test-retest approach. A pilot sample of (50) students completed the test, and retook it (20) days later. The resulting reliability coefficient ($r=0.866$) demonstrated high test reliability.

These values indicate that the test has an appropriate degree of reliability, and this means that the values are appropriate to be reliable and indicate the validity of the test for application.

Third: The Difficulty Coefficient Calculation

The researcher calculated the difficulty coefficient of the items of test. The following table shows the difficulty coefficient of the items as follows:

Table (8)**Values of difficulty coefficient of the writing skills test**

Items	Coefficients of difficulty	Items	Coefficients of difficulty	Items	Coefficients of difficulty
1	0.51	3	0.50	5	0.51
2	0.49	4	0.52		

It is clear from the previous table () that the difficulty coefficients ranged between (0.49 - 0.52), which are good difficulty coefficients, and the difficulty coefficient for the test as a whole was (0.51). These results indicate the validity of the test for use.

Fourth: Discrimination Coefficient Calculation

The discrimination is the test's ability to discriminate between the high- ability students and low-ability students. The following table shows the discrimination coefficients of the test:

Table (9)

Values of discrimination coefficients of the writing skills test

Items	Discrimination Coefficients	Items	Discrimination Coefficients	Items	Discrimination Coefficients
1	0.70	3	0.62	5	0.73
2	0.65	4	0.70		

From the previous table (9), it is found that the values ranged from (0.62 to 0.73) , which are acceptable values and indicate the ability of the test to distinguish between the students. Then the test became in its final form after the adjustments. The test as a whole discrimination coefficient was (0.68). These results indicate the validity of the test for use.

By verifying the psychometric properties of the writing skills test, it was confirmed that the test is reliable for application to the main sample of students from the faculty of Physical Therapy.

Psychometric Properties of Academic English Language learning Speaking Skills Test for students in the faculty of Physical Therapy:

The researcher verified the availability of the psychometric Properties (validity, reliability, coefficient of difficulty and ease, discrimination coefficient) of the test as follows:

First: Validity

In this research, the researcher relied on the validity of the jury members to emphasize the validity of the content, also the internal consistency, and Intrinsic Validity, the following is an explanation for this:

A. Content validity:

The researcher presented the test in its initial on jury of experts form field of curriculum and teaching methods to express their opinions on the appropriateness of items of the test, Based on the viewpoints agreed upon by the jury members, the researcher has done the modifications agreed upon by the jury of experts (80.00% and more). Cooper's equation has been used to calculate the percentage of agreement among the jury members.

The rate of agreement among the jurors on skills of test ranged between (80.00% - 100.00%), as the percentage of agreement on the test as a whole reached (88.00%), which is a high percentage indicating the validity of the test, after making the modifications approved by the jury members, which included an amendment to the formulation of some of the questions of the test, The researcher made the modifications referred to by the jury members, which included modifying the wording of test.

B.Internal consistency validity:

Internal consistency was calculated through the application of the test on (50) student during the pilot study as follows:

Calculation of the correlation coefficients among the test items and total test as follows:

Table (10)

Correlation coefficients between Items of speaking skills test and total test (N=50)

Items	Correlation Coefficient	Items	Correlation Coefficient	Items	Correlation Coefficient
1	0.588**	3	0.796**	5	0.765**
2	0.804**	4	0.870**		

**** Correlation is significant at the at level (0.01)**

The previous table () shows the correlation coefficients between the total test and items of the test have ranged between (0.588) and (0.870), all of which are a statistical significant at the level of (0.01); this indicates the correlation and coherence of the test items, and the test as a whole, which indicates that the test It has internal consistency.

C.Intrinsic Validity

Intrinsic validity of the test was also obtained by using the following formula:

$$\text{Intrinsic validity} = \sqrt{\text{Reliability item}}$$

$$\text{Intrinsic validity} = \sqrt{0.821} = 0.906$$

$$\text{Intrinsic validity} = 0.906$$

Intrinsic validity equal (0.91); which confirms that the test is validity.

Second: Reliability

The reliability of the test was calculated in a number of ways, the Cronbach's Alpha, and Test-retest, as follows:

A.Cronbach's Alpha: The researcher used this method to calculate the reliability of the test by applying it to a sample of (50) student. The Cronbach's Alpha coefficients for the value of the Cronbach's Alpha for the overall test was (0.821) .

Table (11)

Results of The reliability coefficient values

For the Academic English Language learning Speaking Skills Test

Test	Number of items	Cronbach's Alpha Coefficient
The test as a whole	5	0.821

These values indicate that the test has an appropriate degree of reliability.

B. Test-Retest: this study assessed the reliability of speaking skills test using a test-retest approach. A pilot sample of (50) students completed the test, and retook it (20) days later. The resulting reliability coefficient ($r=0.848$) demonstrated high test reliability.

These values indicate that the test has an appropriate degree of reliability, and this means that the values are appropriate to be reliable and indicate the validity of the test for application.

Third: The Difficulty Coefficient Calculation

The researcher calculated the difficulty coefficient of the items of test. The following table shows the difficulty coefficient of the items as follows:

Table (12)

Values of difficulty coefficient of the speaking skills test

Items	Coefficients of difficulty	Items	Coefficients of difficulty	Items	Coefficients of difficulty
1	0.49	3	0.47	5	0.50
2	0.52	4	0.51		

It is clear from the previous table (12) that the difficulty coefficients ranged between (0.47 - 0.52), which are good difficulty coefficients, and the difficulty coefficient for the test as a whole was (0.50). These results indicate the validity of the test for use.

Fourth: Discrimination Coefficient Calculation

The discrimination is the test's ability to discriminate between the high- ability students and low-ability students. The following table shows the discrimination coefficients of the test:

Table (13)

Values of discrimination coefficients of the speaking skills test

Items	Discrimination Coefficients	Items	Discrimination Coefficients	Items	Discrimination Coefficients
1	0.68	3	0.75	5	0.65
2	0.69	4	0.73		

From the previous table (13), it is found that the values ranged from (0.65 to 0.75) , which are acceptable values and indicate the ability of the test to distinguish between the students. Then the test became in its final form after the adjustments. The test as a whole discrimination coefficient was (0.70). These results indicate the validity of the test for use.

By verifying the psychometric properties of the speaking skills test, it was confirmed that the test is reliable for application to the main sample of students from the faculty of Physical Therapy.

Psychometric Properties of Academic English Language learning listening Skills Test for students in the faculty of Physical Therapy :

The researcher verified the availability of the psychometric Properties (validity, reliability, coefficient of difficulty and ease, discrimination coefficient) of the test as follows:

First : Validity

In this research, the researcher relied on the validity of the jury members to emphasize the validity of the content, also the internal consistency, and Intrinsic Validity, The following is an explanation for this:

A. Content validity :

The researcher presented the test in its initial on jury of experts form field of curriculum and teaching methods to express their opinions on the appropriateness of items of the test, Based on the viewpoints agreed upon by the jury members, the researcher has done the modifications agreed upon by the jury of experts (80.00% and more). Cooper's equation has been used to calculate the percentage of agreement among the jury members.

The rate of agreement among the jurors on skills of test ranged between (80.00% - 100.00%), as the percentage of agreement on the test as a whole reached (92.00%), which is a high percentage indicating the validity of the test, after making the modifications approved by the jury members, which included an amendment to the formulation of some of the questions of the test, The researcher made the modifications referred to by the jury members, which included modifying the wording of test.

B. Internal consistency validity:

Internal consistency was calculated through the application of the test on (50) student during the pilot study as follows:

Calculation of the correlation coefficients among the test items and total test as follows:

Table (14)

Correlation coefficients between Items of listening skills test and total test (N=50)

Items	Correlation Coefficient	Items	Correlation Coefficient	Item s	Correlation Coefficient
1	0.823**	3	0.760**	5	0.841**
2	0.873**	4	0.729**		

**** Correlation is significant at the at level (0.01)**

The previous table (14) shows the correlation coefficients between the total test and items of the test have ranged between (0.729) and (0.873), all of which are a statistically significant at the level of (0.01); this indicates the correlation and coherence of the

test items, and the test as a whole, which indicates that the test It has internal consistency.

C. Intrinsic Validity

Intrinsic validity of the test was also obtained by using the following formula:

$$\text{Intrinsic validity} = \sqrt{\text{Reliability item}}$$

$$\text{Intrinsic validity} = \sqrt{0.817} = 0.904$$

$$\text{Intrinsic validity} = 0.904$$

Intrinsic validity equal (0.90); which confirms that the test is validity.

Second: Reliability

The reliability of the test was calculated in a number of ways, the Cronbach's Alpha, and Test-retest, as follows:

A. Cronbach's Alpha: The researcher used this method to calculate the reliability of the test by applying it to a sample of (50) student. The Cronbach's Alpha coefficients for the value of the Cronbach's Alpha for the overall test was (0.817) .

Table (15)

Results of the reliability coefficient values

For the Academic English Language learning listening Skills Test

Test	Number of items	Cronbach's Alpha Coefficient
The test as a whole	5	0.817

These values indicate that the test has an appropriate degree of reliability.

B. Test-Retest: this study assessed the reliability of writing skills test using a test-retest approach. A pilot sample of (50) students completed the test, and retook it (20) days later. The resulting reliability coefficient ($r=0.839$) demonstrated high test reliability.

These values indicate that the test has an appropriate degree of reliability, and this means that the values are appropriate to be reliable and indicate the validity of the test for application.

Third: The Difficulty Coefficient Calculation

The researcher calculated the difficulty coefficient of the items of test. The following table shows the difficulty coefficient of the items as follows:

Table (16)
Values of difficulty coefficient of the listening skills test

Items	Coefficients of difficulty	Items	Coefficients of difficulty	Items	Coefficients of difficulty
1	0.51	3	0.51	5	0.49
2	0.52	4	0.47		

It is clear from the previous table (16) that the difficulty coefficients ranged between (0.47 - 0.52), which are good difficulty coefficients, and the difficulty coefficient for the test as a whole was (0.50). These results indicate the validity of the test for use.

Fourth: Discrimination Coefficient Calculation

The discrimination is the test's ability to discriminate between the high- ability students and low-ability students. The following table shows the discrimination coefficients of the test:

Table (17)
Values of discrimination coefficients of the listening skills test

Items	Discrimination Coefficients	Items	Discrimination Coefficients	Items	Discrimination Coefficients
1	0.70	3	0.60	5	0.67
2	0.63	4	0.71		

From the previous table (17), it is found that the values ranged from (0.60 to 0.71) , which are acceptable values and indicate the ability of the test to distinguish between the students. Then the test became in its final form after the adjustments. The test as a whole discrimination coefficient was (0.66). These results indicate the validity of the test for use.

By verifying the psychometric properties of the listening skills test, it was confirmed that the test is reliable for application to the main sample of students from the faculty of Physical Therapy.

- **The Statistical Methods:**

The Social Sciences Statistical Package SPSS ver.27 was used to perform statistical analyzes, and the methods used in this research are:

- Cooper's equation to find agreement ratios among jurors of experts.
- Cronbach's Alpha, and test-retest to calculate Reliability of the test.
- Intrinsic Validity to calculate Reliability of the test.
- Pearson correlation coefficient to estimate internal consistency of the test.
- The difficulty coefficient calculation, and discrimination coefficient calculation for the test.
- "t-test" for the independent groups to examine the equivalence in Independent Academic Language Learning Skills test between experimental students' group & control students' group, and its significance was verified by the value of (t).
- "t-test" for the independent groups to examine the significance of the differences between the degrees of students (experimental students' group & control students group) to determine the difference in the level of the Independent Academic Language Learning Skills test in both groups, and its significance was verified by the value of (t).
- "t-test" for the paired groups to examine the significance of the differences between the degrees of students (experimental students' group) to determine the difference in the level of the Independent Academic Language Learning Skills test in pre and post application, and its significance was verified by the value of (t).
- Effect size scale " η^2 " to demonstrate the impact of the experimental treatment on Independent Academic Language Learning Skills test.
- the ratio of Blake to verify of effectiveness

4.5.D. Administration

The test was administrated to the first year (the control and the experimental groups), physiotherapy students ,Egyptian Chinese

university, pre and post teaching the EAP content for the control group through the normal content and for the experimental group through teaching the designed English for academic purpose content , the researcher explained the purpose of the test .

4.5.E. Description

The test consists of four sections representing the target four language learning skills which are most needed to be developed through web-research and independent based instruction and which are important for the physiotherapy students' academic life according to the result of the needs analysis independent language learning skills. Every section was out of 25 marks, the total marks for whole test was out of 100.

4.6. Hypotheses of the Study

In the light of the results of the theoretical background, the following hypotheses can be stated:

- 1-There is a statistically significant difference between the mean scores of the experimental and control groups in the post administration of the academic language learning skills test favoring the experimental group.
- 2-There is a statistically significant difference between the mean scores of the experimental group students in the pre and post administrations of academic language learning skills test favoring the post administration.
- 3-Web research-based English language instruction is effect in enhancing physiotherapy students' academic independent language learning skills.

4.7. Results and Discussion

After the research sample was chosen, the actual implementation of the research experiment has started, and this was represented in the following:

Applying the Academic independent language learning Skills test was prior applied to the research sample students as follows:

•Pre-test of the Academic Independent Language Learning Skills Test:

The aim of the prior application of the Academic independent language learning Skills test is to ensure the equality of the two groups in the level of Academic independent language learning Skills before teaching. The prior application of the test was done on the students of the experimental and control groups, and the results were monitored and statistically processed using the (t) test for two independent samples.

the value of (t) was calculated for two independent groups and their significance for the difference between the mean scores of experimental students group and control students group in the total degree of the Academic independent language learning Skills test, and a table (18) shows that:

Table (18)

The value of “t” test and the level of its significance for the difference between experimental group and control group in pre-test of the academic independent language learning skills test

Variable	Groups	N	Mean	Std. Deviation	Df	t	Sig.
Academic Independent Language Learning Skills	Experimental Group	100	21.60	2.331	198	0.607	0.545
	Control Group	100	21.45	0.821			

It is shown from the previous table (18):

- The great Convergence between the mean scores of experimental group students and the mean score of control group students in Total of the Academic independent language learning skills test, where experimental group students got an mean (21.60) with a standard deviation (2.331), while control group students got an mean (21.45) with a standard deviation (0.821), and the calculated value of (t) for the significance of the difference between the mean scores of experimental group and control group students in Total of the Academic independent language learning skills test, which reached (0.607) and the significance level is (0.454) which is greater than the level of significance

(0.05); Thus, there is no statistically significant difference at the level of significance (0.05) between responses For students of experimental group and control group in pre- application to Total of the Academic independent language learning skills test.

- This means that the two groups (experimental & control) are equal in the academic independent language learning skills test as a whole, and this indicates that there is no difference in scores of academic independent language learning skills test as a whole among experimental group and control group in pre-test to the academic independent language learning skills test.
- This result can be illustrated by the following figure (2):

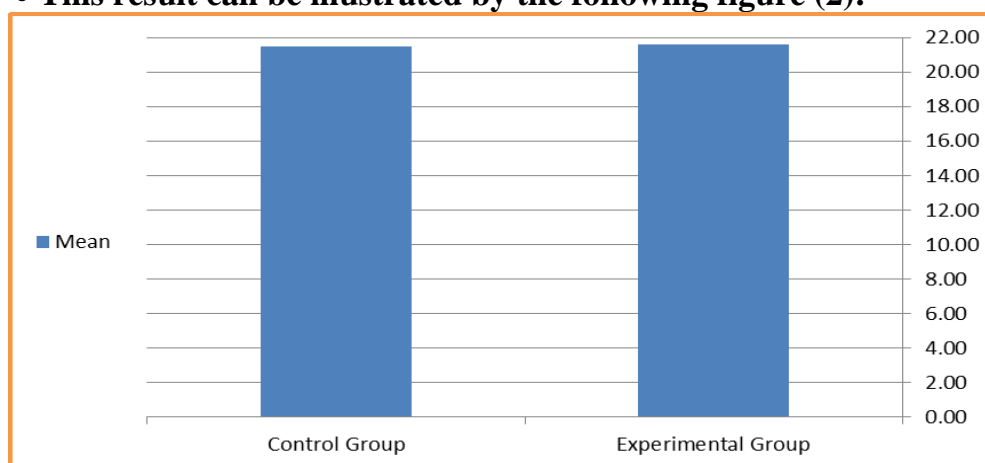


Figure (2)

**A graph showing of mean scores of experimental group
And control group in pre-test to the academic
Independent language learning skills test**

Results

In this section, the researcher presents the results of the study by answering the research questions and testing the validity of each research hypothesis, and then the results are interpreted and discussed in the light of the theoretical framework for the research and previous studies.

•First hypothesis of the research

The first hypothesis Stated that " **There is a statistically significant difference between the mean scores of the experimental and control groups in the post administration of the academic independent language learning test skills test favoring the experimental group** ".

There is a statistically significant difference between the mean scores of the experimental and control groups in the post administration of the academic independent language learning skills test favoring the experimental group.

To test the validity of this hypothesis, the (t) test was employed to two independent groups the experimental students' group and the control students' group in post-test of the academic independent language learning skills test on the content skills. The results are shown in the following table (19):

Table (19)

The value of “t” test and the level of its significance for the difference between experimental group and control group in post-test of the academic independent language learning skills test

Variable	Groups	N	Mean	Std. Deviation	df	t	Sig.
Academic Independent Language Learning Skills	Experimental Group	100	75.73	4.775	198	103.665	.000
	Control Group	100	21.95	2.027			

It is shown from the previous table (19):

- **High of mean scores for experimental group students than mean score of control group students in Total of the academic independent language learning skills test, where experimental group students got a mean (75.73) with a standard deviation (4.775), while control group students got a mean (21.95) with a standard deviation (2.027). it's meant the average scores of experimental group students was higher than the mean scores of control group students in the post-test of total of the academic independent language learning skills test.**

- The calculated value of (t) for the significance of the difference between the mean scores of experimental group and control group students in Total of the academic independent language learning skills test, which reached (103.665) and the significance level is (0.000) which is lower than the level of significance (0.05); Thus, there is statistically significant difference at the level of significance (0.05) between responses for students of experimental group and control group in post- application to total of the academic independent language learning skills test in favor of experimental group.
- This result can be illustrated by the following figure (3):

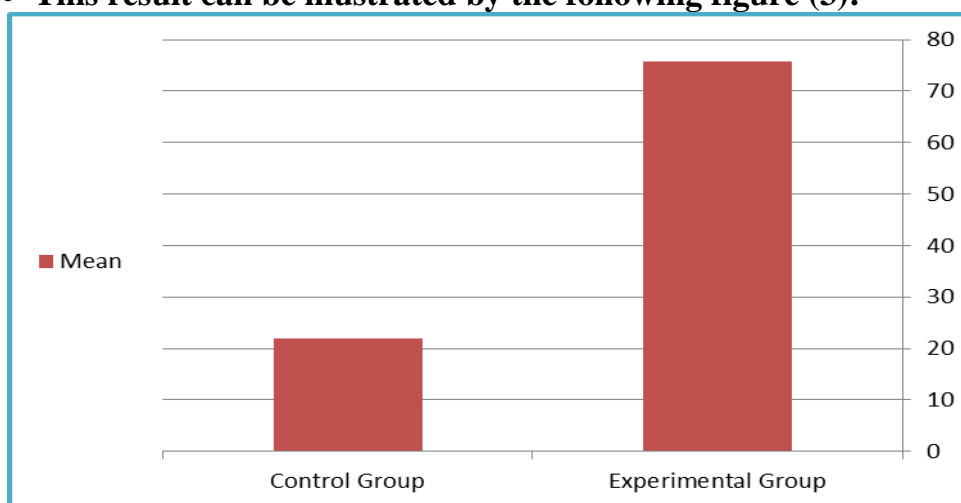


Figure (3)

A graph showing of mean scores of experimental group and control group in post-test of the academic independent language learning skills test

- This means accepting the first hypothesis of research, and this indicates that there is difference at the level of (0.05) between the experimental and control group in the post- test of the academic independent language learning skills test in favor of experimental group.

• The Second hypothesis of the research

The Second hypothesis Stated that "There is a statistically significant difference between the mean scores of the experimental group students in the pre and post administrations of the academic independent language learning skills test favoring the post administration".

To test the validity of this hypothesis, the (t) test was employed to two paired groups in pre and post-test of the academic independent language learning skills test for the experimental students group. The results are shown in the following table ():

Table (20)

The value of “t” test and the level of its significance for the difference between the experimental group in the pre and posttest of the academic independent language learning skills test

Variable	Test	N	Mean	Mean paired differences	Std. Deviation	Std. Deviation paired differences	df	t	Sig
Academic Independent Language Learning Skills	Pre-test	100	21.60	54.13	2.331	5.447	99	99.376	.000
	Post-test	100	75.73		4.775				

It is shown from the previous table (20):

- High of mean scores for post-test about mean score of pre-tests for experimental group students in Total test of the academic independent language learning skills, where experimental group students got a mean (21.60) in pre-test of total test, while got a mean (75.73) in post-test of the academic independent language learning skills test. it's mean the mean scores in post-test of the academic independent language learning skills test for experimental group students was higher than the mean scores in pre-test of the academic independent language learning skills test.
- Mean paired differences between the mean scores of the pre-test and post-test of the academic independent language learning skills test was reached (54.13).

- also the calculated value of (t) for the significance of the difference between the mean scores of the pre-test and post-test of the academic independent language learning skills test, which reached (99.376) and the significance level is (0.000) which is lower than the level of significance (0.05); Thus, there is statistically significant difference at the level of significance (0.05) between responses of experimental students in the pre-test and post-test of total the academic independent language learning skills test in favor of the posttest.

• **This result can be illustrated by the following figure (4):**

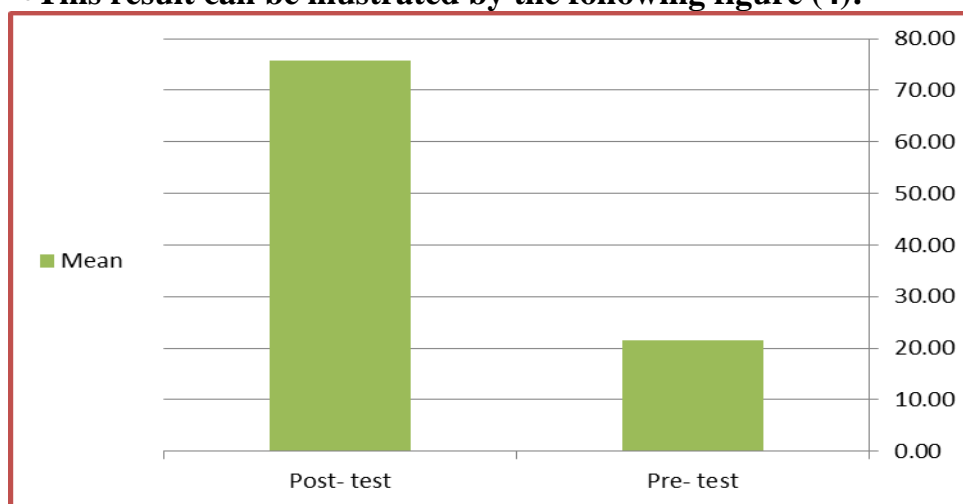


Figure (4)

A graph showing of mean scores for pre and posttest in the academic independent language learning skills test for experimental group

- **This means accepting the second hypothesis of research, and this indicates that there is difference at the level of (0.05) between the mean scores of the experimental group in the pre-test and post-test of the academic independent language learning skills test in favor of the posttest.**

•Third hypothesis of the research

The third hypothesis Stated that " **Web research-based English language instruction is effect in enhancing physiotherapy students' academic independent language learning skills** ".

To test the validity of this hypothesis, the effect size of the Web research-based English language instruction on enhancing the physiotherapy students' academic independent language learning skills.

The following table () illustrates the effect size of the Web research-based English language instruction on developing the academic independent language learning skills.

Table (21)

Value of (η^2) and the level of effect size

The Independent Variable	The Dependent Variable	Implementation	t	η^2	Effective Size	d	The Effective
Web research-based English language instruction	academic independent language learning skills	Experimental Group - Control Group	103.665	0.982	98.2%	14.734	High
		Pre test - Post test	99.376	0.961	96.1%	9.938	High

The previous table (21) shows the following:

- The value of Eta-square (η^2) for experimental group - control group in academic independent language learning skills was (0.982). This means that (98.2%) of variance in the level of academic independent language learning skills is due to use the Web research-based English language instruction, The value of (d) equal (17.734) means the effect size of using the Web research-based English language instruction on students' En academic independent language learning skills is large, because the value of (d) is higher than (0.8).
- The value of Eta-square (η^2) for Pretest - Post test in academic independent language learning skills was (0.961). This means that (96.1%) of variance in the level of academic independent language learning skills is due to use the Web research-based English language instruction, The value of (d) equal (9.938) means the effect size of using the Web research-based English language instruction on

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students' academic independent language learning skills is large, because the value of (d) is higher than (0.8).

- This means accepting the third hypothesis of research, and this indicates that the Web research-based English language instruction is effect in enhancing physiotherapy students' academic independent language learning skills.
- In order to verify the effectiveness of teaching by using the Web research-based English language instruction, the modified earnings ratio of Blake and its significance was applied for developing academic independent language learning Skills for Physiotherapy Students'. the results were as shown in the following table (22):

Table (22)

Blake's modified ratio and its significance for Developing Academic independent language learning skills for Physiotherapy Students'

Variable	Final Grade	Pre Mean	Post Mean	Ratio of Blake	Significance
Academic independent language learning Skills for Physiotherapy Students'	100	21.60	75.73	1.232	Acceptable

It is clear from the previous table (22) that:

- Teaching by Using the Web research-based English language instruction effectiveness in developing academic independent language learning skills for physiotherapy students', as the earning rate reached (1.232), which is considered an acceptable percentage; This indicates that the use of Teaching by Using the Web research-based English language instruction is effective in developing the academic independent language learning skills for physiotherapy students' (the research sample).

5-Interpretation, Recommendations and Suggestions:

Throughout the discussion of the previous results, it has become clear that the web research-based English language instruction is effect in fostering physiotherapy students 'academic independent language

learning skills. Through these results, a number of conclusions can be made:

1. The students tend to be more proficient academic independent learners through using web research English language instruction.
2. Web research-based English language instruction was effective in enhancing physiotherapy students' academic independent language learning skills.
3. Academic learning language with their target skills can be effectively enhanced through using technology and computer assisted language learning.
4. Web research-based English language provided the students with positive teaching and learning environment.
5. Web research-based English language helped the students in being more active, initiative and creative.
6. Web research-based English language connected the students with academic real-life situations of language use and thus, this made learning more realistic to them.

5.1. Recommendation:

In the light of the results and conclusions of the present study, the following recommendation are recommended:

- 1- Students enrolled in the first year, faculty of physiotherapy should be trained in an effective ESP web research-based English language content.
- 2- ESP instructors in the faculty of the Physiotherapy should receive training in using effective web research-based English language instruction to improve the students 'academic speaking skills.
- 3- It is recommended that curriculum designers should depend on developing academic language learning skills through using technology.
- 4- During performing the program, students should be provided with a relaxing and effective environment.

5.2. Suggestion for further researches:

Out of the study results, conclusions and recommendations, the following areas of the study may be suggested for further research:

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- 1- Developing a program through using web research-based English language instruction for developing other skills are not dealt with in the present research and then it is needed to investigate its effect on the other communicative language skills.
- 2- Designing an effective web research-based English language instruction for developing students' speaking skills in the pre-university stage.
- 3- Developing ESP digital web research-based English language programs in different faculties.
- 4- Determining the long-term effect of using the web research-based English language learning instruction in effective different strategies.

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