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Foreword

Review Models, Multiple Voices, & Shared Purposes

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Foreword

Welcome to the December 2019 issue of AESP. In this issue we present an editorial style article that considers the way we review papers. Tharwat El Sakran et al. in *A Genre Analysis of the Schematic Structure and Linguistic Features of Reviewers' Reports on Research Manuscripts* consider the roles of editors in processing review reports. The co-authors include a previous chief editor of AESP and the current editor. We discovered a strong relationship between the cooperation between reviewers and authors and the final decision. We have never met an academic who feels that the review processes leading to potential publication are adequate for purpose, so we hope this paper will provide both reviewers, editors and authors with food for thought.

Beyond the aim to improve review protocols, but not unrelated, Gareth Morgan and Abdulaziz Alfahaid urge us to review our ESP curriculum. Their paper, *The Evaluation of an English for Specific Purposes Course Taught to Pre-sessional Undergraduate Students in Tandem with General English*, clearly meets one of our review criteria in that, set in Saudi Arabia, the paper also has implications for ESP course designers well beyond this context. The relationship between ESP and general English is not a new topic, but it is complex and requires original solutions.

AESP is also interested in receiving papers in under-researched areas of ESP. Chi-yin Hong's paper, *Learning Culinary English through Food Projects —What do Students Think?*, clearly meets this criterion. Hong's paper also adds to the literature on their preferred approach, project-based learning confirming the way this approach almost invariably seems to have a positive impact on motivation.

Keeping with the theme of motivation and engagement, Nguyễn Quang Nhật, Kean Wah Lee, and Nguyễn Ngọc Phương Dung also focus on students' points of view. In *Incorporating the Flipped Classroom Model in an ESP Class: A Quantitative Study*, they explore the benefits of the flipped classroom by looking closely at learners' perceptions of both this approach and their own academic performance. Analysis of their data indicates that the improvements in students' cognitive performance corresponded with greater engagement in the training process.

By contrast, Reza Dashtestani, in *EAP Instructors' Acceptance of Computer-Based Tests in English for Academic Purposes Instruction*, focuses on the attitudes of English for Academic Purposes instructors towards technology use. Although an already popular line of academic enquiry, Dashtestani chooses to acknowledge the barriers and limitations to tech use in the EAP classroom education instead of championing the positive aspects. Being pragmatic, he sees technology as an integral component of teaching, and therefore underscores the importance of building frameworks in which digital literacies can be fostered.

In line with Dashtestani's investigation of the acceptance of computer-based testing, Xu Xiaoshu and Sun Yilin, in *A Technological Pedagogical Content Knowledge (TPACK) Framework for ESP Teachers in Tertiary Education in China*, surveyed ESP teachers' self-confidence in technology-enhanced instruction of English in China. Their work indicates that a greater emphasis is required for the preparation of ESP teachers' ability to use digital tools. Their study has implications for ESP teacher education programs and the cultivation of knowledge required by instructors to function at universities and professional institutions.

Also looking to break new ground, Samira Khakpour Nia and Zahra Shahsavar, in *Comparing the Use of Different Prewriting Strategies on Medical Students' L2 Writing*, believe the results of their research may well open doors to material designers, instructors, researchers, ESP writing experts, and curriculum designers – in the universal quest to improve students' writing. Working

with a sizeable cohort of Iranian EFL medical students, they witnessed the positive effects of employing a host of different prewriting strategies, from listing to mapping and free writing.

Notable consequences to involving students in these writing processes, witnessed by Samira Khakpour Nia and Zahra Shahsavar, were the sense of accomplishment and the enhanced self-esteem of the learners. This reflective sentiment is echoed in John R. Baker's work, *Writing about the Writing Center in the Asian Context: Exploring the Mis/Match between the Reading Levels of Self-Access Materials and the Students Who Visit the Center*. Baker reminds us that the 'writing center' has a greater purpose than to be a fix-it shop for ill-prepared writers. Instead, its role is to transform fledgling writers rather than simply re-shape paper assignments. To get there though, students need to encounter reading material that allows them to access their interests and ultimately be successful in their fields of study.

Even at a glance, it is easily discernible that the papers in this issue share common interests. From the provision of constructive feedback to the writers of research manuscripts to the evaluation of courses and teaching models, each one aims to advance the learning experience, most especially with a view to being relevant and useful to a wider audience. Although this issue combines research on topics that have to date garnered little interest alongside the heavily trafficked areas of tech-mediated instruction, it does so to show the pedagogical attention paid by both to be equally sensitive to the needs of learners and instructors. In this issue, we are also reminded of the significance of simple strategies to equip students for reading and writing – it is a welcome refresher to keep our shared scholarly purpose a priority.



A Genre Analysis of the Schematic Structure and Linguistic Features of Reviewers' Reports on Research Manuscripts

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Abstract

This paper presents the results of a genre analysis of reviewers' reports on research manuscripts submitted for publication consideration in refereed journals. Following the methodology developed in Swales (1981) and Bhatia (1993), 64 reviewers' reports were examined in terms of their schematic structure. The component moves were identified and their linguistic signals were highlighted. We concluded that the nature of reviewers' reports, being personal and evaluative in nature, necessitates the use of the first- person writer pronoun ("I"), qualitative adjectives and premodifying adverbs. The results also show that the 'evaluation' move is lengthier, in terms of the number of words used, than the other moves in the reports since it represents the main communicative purpose of the report. Evaluation is couched in three different ways: explicit, implicit and flagged. A strong relationship is established between the reviewers' cooperation with the manuscript writer and the final decision provided in the 'position' move. That is, the more questions a reviewer raises, the less favourable the decision is going to be, and the more suggestions for improvements are given, the more positive the 'position' move is going to be.

Points and/or issues that reviewers look for are singled out and the linguistic features pertinent to the moves and the steps used for their realization are identified. The study concludes with some guidelines for cooperative and successful reviewing.

Key words: genre analysis, review-reports, schematic structure, scientific publishing, academia practices, journal review processes

1. Introduction

‘Peer-review’ simply means that, before a research manuscript is allowed to appear in a refereed journal, it should be evaluated by another/other peer(s), usually experts who are in the same area of research. They are able to evaluate the research design and originality, the reported technique(s), the argumentation logic, the relationship to other work in the field, the results and how they relate to the objectives, the discussion and the validity of conclusions reached.

Most of the literature on peer-reviews (i.e. Flowerdew, 2001; 2007; 2008; Paltridge, 2013; Solans-Domènech et al., 2017; Starck, 2017; Vieira, and Gomes, 2018; Wager, Godlee & Jefferson, 2002) consists of general guidelines on the process and content of the review reports with an insufficient amount of analysis having been carried out of actual reports. This may be attributed to the inaccessibility of the texts. That is, review reports are classified as ‘confidential’ and are often difficult to obtain. When available, such as with Belcher (2007) and Walbot (2009), problematic review language has been identified. Typically, referees learn to produce referee reports without any formal instruction: by practice, by feedback from editors, by seeing referee reports for their own papers, and by reading referee reports written by others (Lovejoy, Revenson & France, 2011).

For scientists and researchers to gain membership in the relevant academic community and to guarantee communication of their ideas with others in their relevant fields, they have to publish in peer-reviewed scientific journals. This is in line with the famous saying “publish or perish.” One potentially problematic effect of a review is that it may serve mainly as a prescriptive gatekeeper that goes beyond the ability to use academic discourse ‘appropriately’ for inclusion in academic ranks (Berkenkotter & Huckin, 1995). Another potentially prescriptive function of reviewers’ views of appropriate academic discourse is that it serves as a social medium with established norms

for the network of like-minded people in the academic community, a function which can easily become a means of excluding alternative voices (Nunn & Adamson, 2007).

1.1. The Peer-Review Process

The purpose of peer-reviewing a research paper is to determine if the research reported in the manuscript sought information that either was previously not known or not completely understood; that the research was properly set up, accurately conducted, and accurately recorded; and that the results were accurately interpreted and reported. Although the primary responsibility for accuracy and completeness of the research rests with the author(s), the reviewers can often give valuable assistance in the presentation of that information. For example, authors certainly know their material, but may be too close to the situation to present in a way that helps readers follow the rationale used in approaching the problem.

What exactly does a peer-reviewer do? Many journals furnish reviewers with general guidelines to assist in the review process (see appendix 3). These guidelines present potential reviewers with general pieces of advice on internal and external features pertinent to all research papers. Typically a reviewer must decide whether the argumentation of the paper is sound: Is it logical? Does it answer the question(s) posed? Does it give enough detail so that other researchers could reproduce the study/experiments or design a related study for a different context in the same academic area? Is it interesting? Does it follow the conventions of publishing required by a particular journal, etc.? The advice given often lists the points that a reviewer is required to look for.

1.2. Peer-Review Reports

Peer-review reports are intended to serve a dual purpose: to help journal editors make decisions on the publishability of a research manuscript (for details on the preparation of manuscripts for the reviewing process, see Vieira & Gomes, 2018) and to provide clear guidance to the author when he/she comes to revise the manuscript. The reviewer's report, whose main objective is to decide the value of publishing the manuscript, normally entails one of four communicative outcomes:

1. recommending the manuscript for publication without any changes (as it is);
2. recommending minor revisions before publication;

3. recommending resubmission and another round of peer-reviewing after major revisions; or
4. rejecting the manuscript.

In each of the cases, the reviewer has to put forward justifications for the position/stance taken.

2. Objectives of the Study

The present study is a straightforward genre analysis in the tradition of Swales' (1981, 1990, 1996) and Bhatia's (1993) approach that sets up moves (categories) that reflect the reviewer's communicative purposes in the report. According to this approach, genres are characterized in terms of the communicative purposes which they fulfill. Individual instances of genres, or texts, can in turn be broken down into stages which together serve to perform these functions. This study presents a genre analysis of a corpus of peer-review reports written on research manuscripts submitted to refereed journals for possible publication. The main purpose of this paper is to investigate the rhetorical structure of these reports, to identify their moves, to identify typical move order and the strategies (steps) used to realize the moves, to determine the linguistic features and the steps pertinent to the moves and to specify the points/issues these reports deal with.

3. Rationale of the Study

The question of how to write a review report on scientific/academic research papers submitted for possible publication in refereed journals may seem a rather limited and narrow topic. It is, however, presented in the belief that as part of a broad-based approach to English for specific purposes (ESP), one needs to examine in depth various aspects of particular genres of writing and to draw conclusions for teaching materials. Miller (1984, p. 165) suggests that learning a genre is not simply about learning linguistic forms and conventions, but also about learning how to 'participate in the actions of a community'. However, Nunn and Adamson (2007), drawing upon studies into authorial voice (Tardy & Matsuda, 2009) and identity in academic writing (Ivanic, 1998), have warned about the risks of suppressing authorial voice through an over-prescriptive deterministic view of genre. Typical sequences in a data set are interesting for reviewers but should not become prescribed sequences. The difficulty that reviewers face is therefore establishing an appropriate balance between their role in assessing competence and the rights of authors to an identity.

The aim of genre analysis, then, is to relate the linguistic features of a genre to the communicative functions they perform. The purpose of a particular genre, and the context in which it is set therefore, play a crucial role in a genre-based approach to language learning. From a language teaching perspective, while it is useful to think of a genre as consisting of a series of moves (Swales, 1981, 1990, 1996), it will be important for reviewers to prioritize consideration of the argumentation and to be willing to accept alternatives (Nunn & Adamson, 2007). This mirrors a growing trend in some engineering publications to accept non-Anglophone norms, termed as “non-canonical” discourse, in academic writing (Rozycki & Johnson, 2013) and in journals based in the “semi-periphery” of the world of English language publishing (Bennett, 2014).

Writing review reports is a highly complex, recursive reading-writing activity involving constraints that can impose an overwhelming cognitive load on reviewers, thereby adversely affecting their performance and diminishing the utility of the report to the manuscript author. These constraints are represented in the following:

1. What is the purpose of the report?
2. What information should go in the report?
3. How should the report be structured?

Once we obtain answers to these questions, the cognitive load can be kept to a minimum as present and prospective reviewers will approach review report writing with ease and confidence. The outcome of the study is expected to benefit novice and inexperienced referees through giving them detailed guidelines on how to structure review reports and become aware of the linguistic features pertinent to each component of this structure. In this aware-raising process, we also see the potential benefit of directing all reviewers away from practice where “falsification” (Martin, 2008, p. 302) and “hypercorrection” (Lillis & Curry, 2010, p. 164) take precedence. It is also hoped that readers may find this study useful for preparing papers and submitting them for publication. They will know exactly what referees look for and, will hopefully avoid any pitfalls.

4. Review of the Relevant Literature

Like other features of communication, genres do not exist in isolation but form intertextual networks or systems (Bazerman, 1994) linked to each other both synchronically and

diachronically. Swales' (1990, 1996) taxonomy of academic genres- those employed within universities and research institutions for scientific or pedagogic purposes- is summarized in Table (1) below. The list covers both written and oral forms of discourse, categorized according to the kind of audience addressed: those developed for peer communication are classed as **primary** or research-process genres, whereas those serving a didactic purpose are considered **secondary** or derived genres. There is a third category of texts produced for private or semi-private use, defined as **occluded** genres: though less evident, these are essential to the exchange of material, advice and information between researchers, publishers and university administrators. The last category is occluded in the sense that it is not open to public scrutiny. Swales and Feak (2000, p. 9) point out that occluded genres can be particularly problematic for 'junior scholars'.

Table (1): The Academic Genre System (adapted from Swales 1990, 1996)

Primary genres	Secondary genres	Occluded genres
Research article	Lecture	Grant proposal
Journal abstract	Textbook	Recommendation letter
Conference abstract	Introductory text	Request letter for material/advice
Oral presentation	Post-introductory text	Application letter
Thesis	Tutorial	Submission letter
Dissertation	Course description	Cover letter
Book		Research proposal
Monograph		Evaluation letter for tenure/promotion
Chapter		Referees review of book/article
Case report		Referees' grant
Review		Proposal review
Review article		Memo to dissertation committee
		Editorial correspondence

Although much has been written in the form of sound general advice on the purpose and content of peer-review reports in scientific journals, style manuals and books (e.g. Forscher, 1980; Bishop, 1984; Parberry, 1989; Smith, 1990; Kuyper, 1991; Rosen & Behrens, 1994), the level of generality surrounding such guidelines can mislead prospective reviewers. None of these studies, however, include an examination of the structure and the linguistic features of actual peer review reports. A relevant study is that conducted by Flowerdew and Dudley-Evans (2002) who conducted a genre analysis of summative editorial letters to international journal contributors- the letters that journal editors write to authors when sending out reviews and giving their decision regarding publication. After examination of fifty three (53) letters written by an editor of a leading applied linguistics

journal in terms of their schematic structure and linguistic and politeness strategies, they concluded that the letters follow a prototypical structure comprising four moves as follows:

1. preparing the reader for the decision;
2. conveying the decision;
3. making recommendations for revision/improvement;
4. signing off.

At the end of the study, they conceded that no generalizations could be made regarding the schematic structure of the letters, as all of them were written by one editor. It must be noted, however, that this conclusion does not directly concern the present study for the following reasons:

1. Editorial letters only give a concise and brief summary of the reviewer(s) opinion and report the editor's decision whether s/he is going to publish the manuscript or not, whether the author is required to make any changes in the manuscript or not.
2. Reviewers' reports, upon which the editor bases his/her decision do more than this. They elaborately provide a critique of the manuscript, which is being analyzed and evaluated answering the questions how? Why? And how well?

This critique does not necessarily have to criticize the manuscript in a negative sense. It may be largely positive, negative, or a combination of the two. Yet, it is important to provide justifications as to why the writer of the critique responded to the manuscript in a certain way.

5. Data Collection

The data for this study were 64 authentic review reports from the fields of English language teaching, linguistics and English literature. We obtained the reports from journal editors in Arab and European countries. We informed the editors of the purpose of the study. The authors of the reports were both native and non-native speakers of English. We discarded reports written in languages other than English.

One of the requirements was that the corpus should include a representative sample of all report categories (i.e. reports recommending publication without any changes, reports asking for changes and reports recommending rejection). However, we could only obtain one sample of the first category given the difficulty of a manuscript gaining outright acceptance. We assumed that native and non-native writers (being English language specialists) would have near equal competence in the use of the language. The reports comprised a total of 17,342 words. They ranged in length from 98 words to 1057 words. A corpus of this size is sufficient to make initial, tentative generalizations about the rhetorical structure and linguistics features of review reports. Furthermore, the use of two qualified independent raters from the linguistics field has generated an interrater reliability of 96.4%, which lends more credence to our results.

6. Study Approach, Methodology, and Procedures

This research draws on the works of Swales (1981, 1990, 1996), Bhatia (1993), Flowerdew and Dudley-Evans (2002) and Martin (2003). Its purpose was to determine whether the review reports, under investigation, follow any particular pattern (i.e. schematic structure) and if so, to identify the components of this structure in terms of Swales' (1980) definition of 'move' and the strategies and/or steps used in the realization of the moves. A move can be thought of as part of a text, written or spoken, which achieves a particular purpose within the text. The move contributes in some way to fulfilling the overall purpose of the genre. Adopting Hasan's (1989) notion that some elements of texts are obligatory and some optional, we can consider some moves to be obligatory and some optional. In most genres, moves, according to Swales (1990), may unfold in a fixed linear or variable sequence, they may be subject to embedding one within the other and they may be recursive. McKinely (1983) suggests that Swales has used the term 'move' to refer to a semantic unit that is related to the writer's purpose. It lies between the sentence and the paragraph. We note that, while argumentation in particular texts will inevitably display some type of sequential organization, genre theory does not in itself suggest there is a deterministic obligatory sequential order.

We use the term 'strategy' to refer to the way the writers chose to realize, or execute the move (Bhatia, 1993, pp. 30-31). If the moves are realized by a series of strategies in a particular order then, following Swales (1990), strategies can be thought of as 'steps'. The general aim of genre

analysis is to identify the important moves and strategies of a genre, the order of the moves seen in the particular corpus, and the key linguistic features. The next step is to explain why these features were chosen by expert users of the genre to achieve their communicative purpose (Bhatia, 1993). The results of such form-purpose explanation analyses have yielded explanations and schematic representations of the rhetorical structure(s) pertinent to written genres and the most common linguistic features associated with them. The textual boundaries between the moves were identified on the basis of semantic (i.e. content) criteria. In cases of ambiguity, linguistic realizations were particularly useful as a means of confirming the analysis.

7. Schematic (Discourse) Structure of Review Reports

Schematic structures are prototypes which can be subject to different amounts of variation according to the degree to which the genre is conventionalized (Swales, 1990). It is generally agreed that the more conventional a genre is- that is, the more constrained its communicative purposes are- the more predictable will be its schematic structure. As a genre with a clearly defined communicative purpose - to advise on the suitability or unsuitability of a manuscript for publication- review reports are highly amenable to schematic structure analysis but do not necessarily have to be viewed as being rigidly conventionalized. One of the purposes of such an analysis is to examine to what extent the reports under investigation correspond to a prototype and to what degree there is variation.

In what follows, we will describe and exemplify the schematic structure of the corpus. As figure (1) shows, the reports exhibit three basic moves and only one optional move (move 2). These moves are:

1. framing
2. overview
3. evaluation
4. position

We will look at each of these moves and the steps used in their realization in turn. We have identified certain moves as obligatory, but we note that move 3, 'evaluation', which embodies the

primary purpose of the review, in itself permits a less conventionalized structure than moves 1 and 4.

<p>*Move 1: Framing <i>*Step1. report title</i> <i>+Step2. name of journal</i> <i>*Step3. reference to manuscript title</i> <i>+Step3.1. evaluation of title</i></p> <p>+Move 2: Overview <i>+Step1. summary of manuscript content</i></p> <p>*Move 3: Evaluation <i>*Step1. holistic praise</i> <i>*Step2. shortcomings</i> <i>+Step2.1. major shortcomings</i> <i>+Step2.2. minor shortcomings</i> <i>+Step3. suggestions for improvements</i></p> <p>*Move 4: Position <i>*Step1. publishable as is</i> <i>*Step2. conditional publishing</i> <i>*Step3. unpublishable</i></p> <p>Note: *obligatory; +optional</p>

Figure (1): Schematic Representation of Prototypical Structure

Table (2) indicates the frequency of the moves and the steps in the reports.

Table (2): Frequency of Moves and Steps in the Whole Corpus

Move	Frequency
*1. Framing	
<i>*Step1. report title</i>	63
<i>+Step2. name of journal</i>	22
<i>*Step3. reference to manuscript title</i>	63
<i>+Step3.1. evaluation of title</i>	7
+2. Overview	
<i>+Step1. summary of manuscript content</i>	6
*3. Evaluation	

<i>*Step1. holistic praise</i>	43
<i>*Step2. shortcomings</i>	63
<i>+Step2.1. major shortcomings</i>	23
<i>+Step2.2.minor shortcomings</i>	40
<i>+Step3.suggestions for improvements</i>	38
*4. Position	
<i>*Step1. publishable as is</i>	1
<i>*Step2.conditional publishing</i>	56
<i>*Step3.unpublishable</i>	7

Move 1: Framing

This move sets the context and/or the scene for the subsequent communication. It is conventional in style in that it provides a title for the document, the name of journal and initiates the issue to be discussed and/ or evaluated. It is realized by two obligatory steps and two that are optional as follows:

Step1. Report Title (obligatory)

Step2. Name of Journal (optional)

Step3. Reference to Manuscript Title (obligatory), and

Step3.1. Evaluation of Title (optional)

The first step names the document, the second gives the name of the journal and the third cites the title of the manuscript. Step 1 is recurrent in all the reviews under investigation. It labels the text and specifies the context. Step 3 is obligatory as it helps journal editors identify the report and link it to a particular manuscript. This step is only missing from one report. It seems that this particular report was accompanied by a covering letter that gave the title of the manuscript, and for this reason this step did not appear on the review report itself.

In some cases, reviewers provide a less conventional form of feedback regarding the appropriateness of the manuscript title in a separate step. This step is not common in all reports and appears only in seven cases. The motivation behind using such a step may be due to pre-designed reviewers' reports (common in the Arab World), which include a question inquiring

about the appropriateness of the manuscript title: “Is the title appropriate?” Examples of this move and the accompanying steps are:

Example 1 (Report 2)

Step 1: Review Report

Step 2: Name of Journal

Step 3: Manuscript Title

Step 3.1 Evaluation of Title

The title is appropriate and clearly states the concerns of the article.

In this sub-step, the title is positively evaluated. In several cases, reviewers asked for rephrasing or adding specific lexical items to the title. Example 2 from the corpus illustrates this point.

Example 2 (Report 13)

Step 3.1 Evaluation of Title

The title of the paper reflects, to a great extent, its content. However, the key lexical item in the title (lexical item) does not precisely specify the model of syllabus design proposed by the researcher. It merely singles out one of its main features. A more fitting and indeed an all-embracing label for this type of syllabus would be (proposed change).

The first three main steps sometimes occur as three separate items as shown above but most of the time are reduced into two steps as follows:

Example 3 (Report 23)

Steps 1 & 2: Referee Report for (name of journal)

Step 3: Title of Manuscript

In some other cases, steps 1 and 3 are combined in one move as is shown in example 4 below.

Example 4 (Report 3)

Steps 1 and 3: Referee’s Report on a Paper Titled (title of manuscript)

Move 2: Overview

This move provides a summary of the content of the manuscript. In this move, the report writer tries his/her best to give a non-evaluative or pre-evaluative summary, although example 7 below illustrates the difficulty of remaining non-evaluative. Although this move is infrequent (6 occurrences only), it seems that the main objective is to show that the reviewer has indeed read the whole of the manuscript and fully understood it. Examples of this move are:

Example 5 (Report 19)

This paper discusses the strong images of ... and ... in comparison with the image of the ... in (playwright's name and name of play). The author establishes a link between these images and the thematic structure of the play. S/he also establishes a link between such thematic structures and every single theme of the play along with its poetic aspect.

Example 6 (Report 9)

The paper follows up and recasts in current theoretical lore the view that L2 learners are economical and conservative in their perception of language learning in that they tend to partition discourse into controllable and understandable units.

Example 7 (Report 11)

The paper discusses the assimilation of emphasis spread in Arabic, using a multi-layered, non-linear auto segmental model. The presentation underscores the superiority of such a model over a traditional linear approach.

Example 8 (Report 45)

The paper deals with the politeness parameter of literary discourse and its illocutionary force. The author offers a pragmalinguistic analysis of (name of novelist and name of novel).

Move 3: Evaluation

We identify this move as being the central move of the review in that evaluation represents the main objective. It may be realized in five steps and sub-steps, some of which appear to be obligatory and others optional. The reviewers front this move with a holistic impression in the form of general praise. This holistic (general) praise is commonly followed by criticisms of specific points.

Here is an example.

Example 9 (Report 9)

Step 1: Holistic Praise

This article deals with an interesting topic, and makes a convincing case for cultural awareness-raising regarding the use of....

Example 10 (Report 9)

Step 2: Shortcomings

The author seems to have gathered sufficient data to construct a good experimental paper, but needs to present the procedure and findings of the two experiments more systematically and in greater detail. My main criticisms of the paper in its present form are that:

Example 11 (Report 33)

Step 2.1. Major Shortcomings

I can imagine that a publishable version could be hammered out of the article after doing the following major revisions:

1.
2.

Example 12 (Report 28)

Step 2.1. Major Shortcomings

This article addresses an interesting issue but, in my opinion, it lacks structure in a way that significantly reduces its value. Here are a few informal remarks on the article:

Example 13 (Report 9)

Step 2.1. Major Shortcomings

There are some serious inaccuracies in the observations, and my general feeling is that the core points of the paper are under argued. Below I will detail my comments about the paper.

Example 14 (Report 18)

Step 2.2. Minor Shortcomings

Please do minor corrections on pp. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, as indicated in the body of the research.

Example 15 (Report 22)

Step 2.2. Minor Shortcomings

There are a number of typographical errors in the article which need to be taken care of e.g.:

last line in the abstract: Overlapped

line 3 paragraph 2 of page 7: represents

Example 16 (Report 39)

Step 3. Suggestions for Improvements

This article could be made more accessible to the busy reader by dividing it into sections. ... The author might consider creating divisions in the main body of the text to make the exposition easier to follow, and a more clearly stated conclusion than the series of rhetorical questions that make up most of the final paragraph.

A close link is established between the decision given in the ‘position’ move (see below) and the suggestions for improvements. That is, if the decision is “publish with conditions”, reviewers try their best to be as cooperative and helpful as possible by suggesting changes and putting forward suggestions for possible routes. The following are examples:

Example 17 (Report 6)

Step 3. Suggestions for Improvements

I believe that the author needs to reconsider the following:

1. Section 3, ‘Background’, had better bear the title: ‘Review of the related literature’, and be inserted immediately after section 1 ‘Introduction’.

Example 18 (Report 58)

Step 3. Suggestions for Improvements

‘Implications’ should precede ‘Recommendation’, for in view of the implications, one can recommend.

Move 4: Position

This move is aimed at two different types of audience: the journal editor and the manuscript writer. It has a dual purpose: a. to guide the journal editor in making a decision, and b. to instruct the manuscript writer as to what action is required of him/her. This move presents the report writer's stance regarding the issue at hand.

We prefer not to name this move the 'decision' move, as one referee's position does not decide the fate of the manuscript. The final decision concerning the fate of the manuscript is dependent on the outcome of the other reports and the editors' readings of the reviews.

As Figure 1 and Table 2, above, illustrate, the reviewer (s) may choose from three mutually exclusive options making it inevitably more conventionalized than the preceding evaluative move:

- Step 1. Publishable As Is,
- Step 2. Conditional Publishing, or
- Step 3. Unpublishable

Step 1. Publishable As Is

Example 19 (Report 3)

I find the article worthy of publication without any change whatsoever.

This is the only incidence of outright recommendation for publication without any suggestions for amendments. This corroborates Flowerdew and Dudley-Evans' (2002, p.468) statement that "Outright acceptance or rejection are rare and the invitation to resubmit is the most common". In terms of genre analysis, we note that, while we have labelled identifying shortcomings as 'obligatory' above, we also note that this is only because of its overwhelming frequency.

Step2. Conditional Publishing

All except eight the reports in the corpus fall in this category. Conditional publishing is granted to manuscripts that need superficial changes such as, typographical errors, consistency of bibliographic details, providing more background information on specific issues, chunking the text into manageable paragraphs and sections, removing ambiguities, moving text chunks from mainstream text to appendix, etc.

The ‘position’ move always follows the evaluation move and seems to be a natural transition from it. In some rare cases, it comes immediately before the evaluation move and, in such cases, the evaluation move acts as a justification for the position taken. Examples of such cases are:

Example 20 (Report 5)

I recommend that the manuscript be considered for publication after carrying out the following revisions:

Example 21 (Report 28)

I think the paper can be published provided certain changes are made. The most pressing theoretical issue that needs to be addressed to my mind is an account of the loss of faire par (FP)-infinitives in English...

The following are representative examples of some of the changes that manuscript writers are required to do before final acceptance is granted. Some reviewers show their position in a clear and transparent manner that cannot be misinterpreted by anyone, whereas others express it in an ambiguous way that only journal editors may be able to decipher and convey to the manuscript writer. Here are some examples:

Example 22 (Report 2)

The manuscript as it stands, however, needs some corrections and would, I think, be improved by the modifications suggested above.

Report 2, from which the above extract is taken, states that the manuscript would be improved by the modifications suggested, but did not clearly indicate whether the manuscript is publishable or not after implementing the recommended modifications.

Example 23 (Report 34)

I propose two main changes before the paper is accepted for publication. These are:

Example 24 (Report 19)

The paper lacks organization in terms of headings and subheadings, which makes it unpublishable in its present form. However, I feel that once these changes have been implemented, the paper will be acceptable for publication.

Example 25 (Report 29)

The article is certainly worth publishing provided the grammatical and spelling errors, I indicated on the manuscript, are corrected.

Example 26 (Report 51)

I consider the article publishable, with such other revisions as I have indicated on the manuscript, only after any possible borrowing on pages 5 to 9 has been acknowledged, or after any possible thought of unacknowledged borrowing has been removed.

Example 27 (Report 6)

I, therefore, recommend that this paper be published once the minor comments I made are dealt with.

Example 28 (Report 11)

This paper is publishable after fixing the typing errors indicated on the manuscript.

Example 29 (Report 2)

There are a number of grammatical and spelling errors, and some obscurities of expression, which I have pointed out in the manuscript.

The comments given have a close link with the recommendation stated in the ‘position’ move. If the position is “publish after corrections”, then the suggestions for changes are made very specific. By contrast, if the recommendation is major corrections, it seems that reviewers over-exaggerate the need for corrections. Some reviewers might be following this strategy to discourage him or her from making a resubmission: another indirectly polite and tactful way of rejecting the manuscript. This is a point that lies beyond the scope of this paper, but calls for further investigation. Future research might follow up manuscripts with major corrections and investigate whether writers actually carry out the recommended changes and resubmit the manuscript.

Example 30 (Report 39)

Recommendation: The research is suitable for publication after carrying out all the required changes.

Example 31 (Report 22)

I find the work publishable taking into consideration the above remarks.

Example 32 (Report 6)

Despite the above remarks, this paper is publishable provided that the author makes the necessary amendments.

Example 33 (Report 10)

Recommendation: The paper is publishable if the above revisions are made.

Step3. Unpublishable

There are only seven cases of this step in the corpus (64). This step is, in the majority of cases, expressed in the form of ‘**revise and resubmit**’. Although the expression ‘revise and resubmit’ means what it literally says, upon reading some of the reviewer’s comments, we interpret the required changes to be so crippling and challenging that the manuscript writer is unlikely to go for them. What supports this assumption is a journal editor’s letter (see Appendix 2) sent with two reviewers’ reports that carry the label ‘revise and resubmit’. The way this letter is phrased conveys the editor’s suspicion that the writer will not be able to do the changes and amendments required by the reviewers. The following is an extract from this letter:

If you decide to resubmit and are able to do so, your paper would be re-reviewed
and if reviews are positive it could be considered for publication in Vol 1 No 2.

We interpret the wording to mean that the journal editor is indirectly trying to dissuade the writer from considering resubmission. What makes this view plausible is the editor’s insistence on making it clear to the writer that, in case of resubmission, the paper will be sent for another round of review.

It seems that the ‘revise and resubmit’ label is another way of politely (a point that we will come to later in the discussion) rejecting the paper altogether. Different realizations of this step are:

Example 34 (Report 24)

My general reaction to this paper is that it is not ready for publication. The paper needs substantial revision and rethinking.

Example 35 (Report 60)

I rather like this paper. It is a careful working out of a plausible sequence of grammars for bare and to infinitives as complements of verbs of causing (and permitting, and knowing and saying). The stated facts are those generally accepted within the field; the argumentation seems careful. Having said that, though, it is to me a surprise to see such a paper submitted to (name of journal). There is little or no fresh theoretical proposal/discussion here, though it updates Wyngaerd's proposal that the infinitive morpheme may be an argument, laying out the analysis in some detail: in one sense the paper is rather descriptive, using grammatical analyses that are argued for elsewhere in the literature. It proposes a sequence of grammars, indicating why each should change into the next. It will be of considerable interest to a historian of English syntax; of some to syntacticians more generally. But it is difficult to see why it meets (name of journal)'s basic aim to provide a forum for the discussion of theoretical research. So my overall judgment is that you should reject it, while encouraging the author to take it elsewhere.

Example 36 (Report 52)

I find that the structural problems are so significant and pervasive that I am pessimistic as to its chances of being transformed into a publishable paper.

Example 37 (Report 42)

This article addresses interesting issues but lacks structure in a way that makes it unpublishable as is. If it underwent major revisions and other rounds of reviewing, it could be turned into a publishable article, however.

Example 38 (Report 36)

The presentation of the study and the results is completely inadequate. The data section is almost impossible to follow.

In report thirty six, from which the above extract is borrowed, the reviewer never clearly stated his/her position as to whether the manuscript is publishable or unpublishable. However, from the many negative remarks made in the 'evaluation' move, we inferred that the manuscript is rejected. We also note that in this category of reports reviewers raise more questions than give suggestions for improvements.

Example 39 (Report 9)

Not recommended for publication, but could be considered following substantial reworking (revise and resubmit).

8. Summary of Schematic Structure

To summarize this analysis of the schematic structure of the reports, while a prototypical structure based upon the four moves can be seen to underlie all of the examples, in some aspects there are degrees of variation. In the majority of cases (7), where the report was unfavorable and the manuscript was deemed unpublishable, the ‘position’ move came immediately after the ‘framing’ move, then followed the ‘evaluation’ move. In very rare cases (2 instances), the ‘position’ move, sometimes, is hinted at in the ‘evaluation’ move. That is to say, the ‘position’ move is implied in the ‘evaluation’ move by indicating serious and major shortcomings with the manuscript that would make it unpublishable.

Before we move on to discussing the linguistic features of the moves detected, we will present a list of the points that reviewers cover in their review reports that could guide prospective reviewers.

9. Points/Issues Dealt with in Reviewers’ Reports

We stated earlier in this paper that some journals send manuscripts out to reviewers without providing them with any information to guide them on what to do. This is always done on the assumption that reviewers are in fact researchers who already know how a research paper should be presented and who know what to look for when reviewing a research manuscript for possible publication. It is true that some journals do provide reviewers with general guidelines that they may use as a yardstick against which the manuscript should be judged (see Appendix 1) for samples of such guidelines).

It is the purpose of this section to present a discussion of the points/issues that reviewers focus on when evaluating a research manuscript for possible publication. The importance of such a discussion lies in its being based on an examination of an actual body of authentic review reports. Also, it is expected that the outcome may be used in training and guiding potential reviewers. As indicated by Paltridge (2013), reviewers are frequently taken on by journals not on the basis of their competence in reviewing, but rather their qualifications in the field. Some journals may

require new reviewers to undertake some degree of orientation, or reviewer development followed by ongoing mentoring, into how to review sensitively to authors with language difficulties or who write in a way that does not conform to normative styles (Adamson, 2012).

After careful examination of the review reports under investigation, we found that reviewers cover, more or less, the following issues: some of which focus on **external elements** (i.e. textual characteristics), whereas others are concerned with **internal** ones as shown in Table (3) below. It should be made clear that there is some overlap among these elements. That is to say, external elements are vehicles for the realization of the internal ones.

Table (3): Elements Reviewers Use for Evaluating a Research Manuscript

1. External elements	2. Internal elements
1.1. first impression	2.1. attraction
1.2. heft	2.2. interpretation
1.3. style	2.3. consistency
1.4. chunking	2.4. conventions

These terms and their definitions are adapted from Kumpf (2000).

We will deal with the component elements of each group in turn and show how the availability and/or non-availability of such elements may trigger negative and/or positive feelings on the part of the manuscript readers (the reviewers).

9.1. External Elements

9.1.1. First Impression

We confirmed (through personal communication with some reviewers) that reviewers, when they are sent a manuscript for reviewing, first skim the manuscript to gain a general impression about it. This first impression is based on the external skeleton of the manuscript. They make sure that the manuscript meets the formal structure of a research paper; that it has a title, an abstract, an introduction, a methods section, a results section, a discussion section and a bibliography. Any violation of the reader's expectations of the genre may create unfavorable first impressions on the part of the reviewers. Gill and Whedbee (1997, p. 164) state that:

an expectation of genre establishes the rhetorical parameters of a text, determining not only its structure but also its vocabulary, syntax, argumentative moves and narrative appeals. The speaker who oversteps these parameters, betraying audience expectations, often provokes a negative response.

The following is an example.

Example 40 (Report 35)

There is no conclusion to this paper. It would be helpful if the author sums up his/her ideas or wraps up his/her paper in a one or two paragraph conclusion.

9.1.2. Heft

Closely related to the first impression is ‘heft’, a concept similar to the bulk or length of a manuscript. The term ‘heft’, as used here, refers to the ‘under-informativity’ and/or ‘over-informativity’ of a manuscript or parts of it. This heft is decided in terms of readers’ background of the topic dealt with. In many cases, heft influences the reception of a manuscript. A manuscript may be deemed to have too much heft or too little heft. Writers who significantly deviate from an assigned or expected heft may trigger negative responses from the reviewers. Reviewers may require writers of such manuscripts to either reduce or increase their heft. Here are examples from the corpus.

Example 41 (Report 35)

The title is long and might be perceived by the reader as boring. It would be a good idea for the author to come up with a short and attractive title that would appeal to the reader. Here are some suggestions:

1. ...
2. ...
3. ...

Example 42 (Report 35)

The approach adopted by the research is not fully explained. Emphasis should be placed on the objectives of this paper so the reader can make the link between the paper and its application. For example, on the first page, the author could have stated the specific purposes of the paper, the approach he adopted, and the rationale behind using such an approach. Also, it would be better if the researcher could consult more recent works done about this topic.

Example 43 (Report 6)

Some background to Diachronic Reanalysis should be presented. Also the author should make an explicit statement about how the loss of the dative ending on the infinitival verb relates to the loss of overt case marking in general in the history of English.

Example 44 (Report 28)

The story's literary background section must be reduced to two thirds of its present size.

Example 45 (Report 9)

The account of the second experiment lacks the statistical information required to support the claim of significant difference.

9.1.3. Style

Examples include too much wording, boldface, italics, line width, fonts, awkward and ambiguous wording, footnoting decisions, etc. As far as style is concerned, it may be a good practice if journal editors send reviewers a copy of their style guide to use as a yardstick. In fact, style is the vehicle through which the main argument is executed. Here are some of the reviewers' comments on aspects of style.

Example 46 (Report 6)

Page 2, first full paragraph: 'In the meantime'. Awkward wording.

Example 47 (Report 19)

I wonder if the in-house style of the Journal adopts the author's footnoting system; otherwise, the footnotes can appear at the end of the article, just before 'References'.

Example 48 (Report 9)

1. Some subheadings are in lower case and others are in upper case.
2. Why is the student's speech given in italics, and the teacher's reply in ordinary type? It would probably be better to avoid direct speech entirely, and paraphrase instead.
3. Italics are used inconsistently.

Example 49 (Report 11)

Names of journals should be italicized and volume numbers should be bold faced.

Example 50 (Report 2)

There are a number of grammatical and spelling errors, and some obscurities of expression, which I have pointed out in the manuscript.

Example 51 (Report 3)

The paper has been written in a proper academic style. There are, however, a few typological slips that need to be corrected.

9.1.4. Chunking

Writers may visually help readers through a manuscript by arranging text into discrete visual parts. This is commonly manifested in the shape of a paragraph and this concept can extend to all visual levels of a manuscript, from the sentence, to paragraphs, sections, and chapters. A considerate writer will chunk items into visual parts to help readers identify the constituent parts of a manuscript and to show the boundaries of related items, such as related sentences in a paragraph, related paragraphs in a section, etc. Chunking helps readers process the contents of a manuscript in parts rather than as a continuous flow of text without any breaks. Also, it prevents long stretches of text that may make the reader think the document is dense and therefore too difficult to read. Items are chunked not because the text requires it but because it may improve the writer-reader relationship.

Here are a few comments made by reviewers in which they require manuscript writers to chunk the text in smaller and manageable pieces.

Example 52 (Report 39)

The article could be made more accessible to the busy reader by dividing it into sections. There are thirty nine paragraphs, and the ninth begins, ‘The preceding remarks may serve as a preface to the tale...’. As these ‘remarks’ take up five pages of typescript, they might be better separated as an introduction. The author might consider creating divisions in the main body of the text to make the exposition easier to follow, and a more clearly stated conclusion than the series of rhetorical questions that make up most of the final paragraph.

Example 53 (Report 35)

Also, the paper lacks organization. There are no headings or subheadings to the topics discussed which makes it hard for the reader to follow. The 20 page paper is presented with NO headings or subheadings at all. Therefore, in order for the reader to follow the themes of the paper, the author has to divide the topics into subheadings and deal with each heading separately.

9.2. Internal Elements**9.2.1. Attraction**

Writers may engage readers through a document by initiating a response that ranges from high interest and continued reading to no interest, guiding them through the document to its end. Attraction, in this sense, means the novelty of the ideas presented in a manuscript. A writer’s attempt to tackle a research topic in a new way or to show how an old issue can be interpreted in the light of new theories will win him/her the admiration and support of the relevant discourse community members and vice versa. This is, in fact, the crux of genuine research. Researchers are always commended on new and novel treatments of research topics. By contrast, research manuscripts that do not show any originality in the treatment of research topics antagonize reviewers and this, in turn, results in negative comments. Examples supporting this point from the corpus are given below.

Example 54 (Report 2)

The article shows some originality of approach to the subject matter, and creativity in execution, in relating the story’s language patterns to the author’s delineation of character.

Example 55 (Report 60)

There is little or no fresh theoretical proposal/discussion here, though it updates Wyngaerd's proposal that the infinitive morpheme may be an argument, laying out the analysis in some detail: in one sense the paper is rather descriptive, using grammatical analyses that are argued for elsewhere in the literature.

Example 56 (Report 35)

The content of this paper is original and the information presented is authentic.

Example 57 (Report 3)

The author of this article raises an original point. The article is, in my view, a good and serious piece of research.

Example 58 (Report 4)

By bringing together visual and literary representations of Alexander, the author manages to highlight some distinctive features of both, and could thus be said to make a valid contribution to literary as well as to 17th-century cultural studies.

Example 59 (Report 24)

I do not find the proposed optionality of Case and phi-features attractive since these are morphological features and morphology is not ordinary.

9.2.2. Interpretation

This concept, 'interpretation', as used here exists within the text and provides a salient way to show authorial control and presence in the manuscript. It refers to the way a writer presents and interprets the results and explains their significance. It also refers to the way a certain issue or point is argued for or against and the evidence brought into the text to support the argument. Well-argued theses and logically presented evidence win reviewers' praise. By contrast, poorly argued papers and loosely presented evidence attract negative comments from reviewers. Here are examples of both cases from the corpus.

Example 60 (Report 2)

The author's stated intention is to 'cite negative situations pertaining to the character by Bartleby in order to come {up} with explicit evidence to the kind of negative identity that gives him fictional existence' (p. 5). The situations are duly cited, with 'negative' language italicized. Some of the examples, though, seem to me to be insignificantly negative, such as 'the uncarpeted floor': surely the state of the floor can have little bearing on Bartleby's character. And generally, the negative language of the story does not seem to me to be accounted for as 'explicit evidence to the kind of negative identity that gives him fictional existence'.

Example 61 (Report 21)

p.5. (3): more argumentation is needed to really show that these cannot be object control, e.g. the possibility of expletive subjects of the infinitive.

p.6: as far as I know, the FP terminology was first applied to ME by Roberts (1993, p. 282).

p.12: this change was certainly noticed in Roberts (1993, p. 287)

p.13, bottom: is it really true that sequences such as *to have/be not* are not found in earlier English?

p.21, (26): the author should make it clear that the *-en* morphemes in (a) and (b) are different things (passive and infinitive, respectively).

Example 62 (Report 24)

... the proposed analysis is not contrasted with alternatives and no evidence is given in its support as against those alternatives. This turns the minimalist apparatus from an explanatory framework into a descriptive one. What are the reasonable alternatives to the approach taken and why are they inferior? The second point is that there is insufficient comparison with other Germanic languages. Comparison with Romance is fine but, in general, the closer parallels are with West and North Germanic.

Example 63 (Report 30)

In fact, the examples of FP infinitives from the various historical stages of English given in the paper all involve bare infinitives as well; the alleged cases of FP to-infinitives are in fact dubious (see my above comment on (11)). For this reason, the paper's account of the disappearance of FP-infinitives in terms of a feature of the infinitival marker *to* is unsatisfactory.

Example 64 (Report 3)

The problem here, however, is that the researcher fails to inform the reader on how the validity and reliability of the items of the questionnaires and interviews have been tested. A further deficiency relates to the researcher's failure to provide a statistical analysis of the responses given by the participants in the questionnaires and interviews. This is particularly important to ascertain that the responses given in support of certain items in the proposed model of syllabus design were 'statistically significant'.

Example 65 (Report 9)

There are some serious inaccuracies in the observations, and my general feeling is that the core points of the paper are under argued.

There is a certain lack of balance between different parts of the paper when it comes to what is presupposed on the part of the reader. Theoretical points are not always explicated.

Example 66 (Report 52)

The relevance of discussions to the theme of the paper and the theme of the paper itself is too often unclear, which gives a damaging anecdotal feel to the paper (p. 15) Interesting data on metathesis but they are misleading with respect to the purpose of the paper: documenting the phonology of sonorants. Here some metatheses involve two sonorants but others involve a sonorant and an obstruent. Given that most Arabic roots contain at least one sonorant, the chances are very high that a sonorant will be involved if two consonants are switched randomly. So these data do not, by themselves, show that sonorants move around easily. They do not even argue for sonorants as a natural class. I think a good case could be made for metathesis applying mostly to sonorants but the author has not made it here.

Example 67 (Report 6)

...there are two major problems with the analysis proposed in this paper. First, if the construction is a PP, why isn't the distribution like ordinary Old English PPs—i.e., why does the to + infinitive always appear post-verbally? A response to this question is given in endnote 16: the more internal structure a constituent has, the heavier it is, and therefore the more likely it is to appear post-verbally. However, the weight of constituents in constructions of this type is not measured in terms of internal structure (which will vary from one framework to another and from one analysis to

another), but rather in terms of information structure, which can be very roughly measured by the length of the constituent (Pintzuk, 1996).

9.2.3. Consistency

Consistency covers external and internal elements. The former is revealed through features such as, spacing, indentation, parallel constructions, font style and size, etc. Manuscripts affronting consistency may also affront cohesion and coherence. Consistency helps readers see the manuscript as a unified whole whose parts support the unity of a common theme. Internal consistency means that writers have to be aware not to say something that clashes with or contradicts something stated earlier in the manuscript (i.e. inconsistency of argumentation). Here are some examples, from our corpus, that have attracted negative comments from the reviewers.

Example 68 (Report 52)

Here these data would even argue against the thesis of the sonorant as a late addition to the etymological bilateral root (p. 22.). Yet the author also uses them as an illustration of sonorant behavior.

Example 69 (Report 9)

8. Examples are inconsistently numbered (e.g. the example on page 2 is not numbered at all). The author should use a continuous numbering throughout the paper. The references are also formatted inconsistently (e.g., names of journals should be italicized and volume numbers should be bold faced).

Example 70 (Report 5)

4. There should be consistency in the use of abbreviations. For instance, the writer sometimes uses the letter ‘v’ for volume and, in other references employs the abbreviation ‘Vol’. In some other references the volume No. is given without any abbreviations.

Example 71 (Report 3)

Besides, the organization of the paper and the interrelatedness of its various sections could have been made clearer if sequential numbering has been used.

Example 72 (Report 3)

Further, there is a lack of consistency in documenting the details of a few references. For example, the first name of the author is sometimes given in full (e.g. Bell, Roger, 1981) while at other times only the initial letter of the first name is written (e.g. Breen, M, 1984).

9.2.4. Conventions

The concept describes what the discourse community expects from the appearance of a manuscript based on its similarity or dissimilarity with other documents in the field. Generally, there appears to be an assumption that researchers seek to conform to the conventions of their professional societies and publications to gain membership in their relevant communities. To choose to work within a convention means that a writer is seeking acceptance by other members who also use that convention and that the writer recognizes the boundaries and implications of that convention. Violating the conventions pertinent to a genre (i.e. research papers) attracts negative comments from expert members in the relevant discourse community. The following are examples of genre violations.

Example 73 (Report 9)

3. Page 2, the author quotes from Just and Carpenter (1980), Kennedy (1987) and O'regan (1979) but does not mention the page number(s). It is recommended that the author recheck all the quotations he/she cites in the paper.
4. Page 5, 2nd para. Chomsky (1986) is not mentioned in the references. The author should specify where exactly Chomsky says that, i.e. which page?

Example 74 (Report 6)

1. The introduction is a bit ill-organized and unclear. It should begin with some general **background information about the problem**, followed by the **purpose of the paper** and the **author's experimental work**.
2. Normally, the tables are not inserted within the text. Rather, they appear as an appendix (es), and **cross-reference** is made to them throughout the discussion.
3. No cross-reference is made within the text to the given appendix.
4. Finally, 'Implications' should precede 'Recommendation', for in view of the implications, one can recommend.

Example 75 (Report 9)

First of all, the paper should contain an abstract which presents the main concerns of the author, and a short introduction which outlines the overall organization of the paper. Disappointingly, the author fails to do so.

10. Linguistic Features of Review Reports

In the preceding discussion of the rhetorical structure of review reports the focus was on the deployment of the moves, their contents and the steps used for the realization of their communicative purposes. It was made clear that the lengthiest move (in terms of the number of words) was the ‘evaluation’ move, since it represented the main communicative purpose of the reviewers’ reports. As evaluation, in the genre under discussion, is mainly concerned with expressing the writer’s opinion and critical assessment towards what he/she is writing about, there is a need to investigate its more subjective/personal nature. The focus is on the use of personal pronouns that indicate powerful authorial presence (Hyland, 2002).

As Thompson and Hunston (2000) note, “the expression of the writer’s or speaker’s opinion is an important feature of language” (p. 2). This is particularly true for review reports in which the expression of opinions is one of the central features. In this special text genre reviewers provide journal editors and manuscript writers with information about the possible publication of a submitted research manuscript. Reviewers do this by commenting on the manuscript and by telling the intended audience (i.e. journal editors and manuscript writers) what they think about it. They do so by pointing out the perceived merits and defects, identifying problems, asking questions, and presenting positive or negative implications of the analysis.

Therefore, review reports represent an evaluation-loaded genre by nature, in comparison with all the other genres existing in the academy. This feature therefore outweighs over features of the review in importance. Since the overall purpose of review reports is to critically evaluate research manuscripts, the following discussion will focus on the linguistic resources used by reviewers to express their positive and negative evaluations. I use the term ‘evaluation’ in a rather general sense as defined by Thompson and Hunston (2000, p. 5). They define evaluation as “the broad cover term for the expression of the speaker or writer’s attitude or stance towards, viewpoint on, or feelings about the entities or propositions that he or she is talking about”.

Taking the different moves as reference, interesting results emerged as to the way reviewers distribute their evaluative remarks throughout their reports. Reviewers manipulate the expression of their stance by placing their positive and negative remarks strategically (e.g. if a reviewer finds a given manuscript quite good, he/she will tend to open and close the review with rather positive comments and leave the less favorable comments for the middle part-move 3: providing focused evaluation of the manuscript). The analysis also reveals that evaluation occurs in several segments, but is concentrated in one move (move 3, which is the evaluative move par excellence) whose onset is signaled by an overtly evaluative act.

Evaluation, following Shaw (2003), can be divided, in terms of directness, into three types: ‘implicit’, ‘explicit’ and ‘flagged’. The majority of evaluative acts are explicit. They contain overtly evaluative items, but some are implicit and others are flagged. The last category is the most overt type of evaluation. It is flagged in the sense that it is introduced by a title declaring it to contain an evaluation of a certain kind. Consider these examples of explicit and implicit negative and positive evaluations and flagged evaluations:

Example 76 (Report 30) (Explicit negative evaluation)

The present proposal is hardly convincing.

Example 77 (Report 60) (Explicit negative evaluation)

There is little or no fresh theoretical proposal/discussion here,...

Example 78 (Report 3) (Explicit positive evaluation)

The researcher should be further commended for the extensive coverage of the components...

Example 79 (Report 35) (Explicit positive evaluation)

The paper discusses a very significant topic.

The author successfully establishes a link...

The paper is well-written and the language utilized is clear.

Example 80 (Report 21) (Implicit negative evaluation)

This change was certainly noticed in Roberts (1993:287).

Example 81 (Report 60) (Implicit negative evaluation)

The paper is rather descriptive, using grammatical analyses that are argued for elsewhere in the literature. Conclusions from historical data are sometime too strongly stated.

The last two examples (80 and 81) fall within the implicit negative evaluation category. They can only be understood as negative within the general value system of the academic community. That is, the negative evaluation is not inherent in the words themselves, but in the ideologies adopted by members of the relevant academic community. These examples, when evaluated against the presuppositions that new research should present something new, that something which is already argued for in the literature is not new and that research conclusions should be presented in a modest and a proper academic style, are seen as implicit negative evaluations. Worth noting here is that interpretation of these examples depends on having recourse to the previous sentences which represent the context for their proper interpretation.

Example 82 (Report 18)

My main criticisms of the paper are: (Flagged evaluation)

We found the use of the personal pronoun “I” (Hyland, 2002; Hyland & Tse, 2004) to be linked to the expression of the speaker’s or writer’s attitude. However, we believe that the writer’s opinion is not inherent in the use of the pronoun “I” itself, but in the verbs and any other attitudinal markers that accompany it. For this reason, the focus of the following discussion is to specify the grammatical structures that accompany the first-person writer pronoun “I”, in order to investigate if they also contribute to the marking of stance. In the context of statements expressing evaluation, the personal pronoun “I” is found to recur with the following evaluatory structures:

- I + copular verb + affective or evaluative adjective or noun
- I + affective or evaluative verb
- I + attitudinal marker + modal
- I + modal verb
- I + modal verb + lexical verb
- I + verbal phrase

Examples of these structures are:

I am shocked...

I rather like this paper.

I think you should ...

I would recommend eliminating...

I do not find the proposed optionality of Case and phi-features attractive.

I find that the structural problems are so significant and pervasive that I am pessimistic as to its chances of being transformed into a publishable paper.

The structures above contain words (lexemes) that attribute the opinion to the writer and show his/her stance.

Quantitative results demonstrate differences among moves in the number of first-person writer pronouns used. The differences among the moves in the pronoun number point to differences in the communicative purpose of each move. The communicative purposes of the ‘framing’ move and the ‘overview’ move do not require any involvement from the writer in their contents. By contrast, the personal nature of the ‘evaluation’ and ‘position’ moves triggers involvement and the frequent use of first-person writer pronouns that attribute opinions to the report writer. The function of the pronoun ‘I’ is similar to what Hyland and Tse (2004, p. 169) term “self-mentions”. The use of the first-person pronoun, “I”, and its derivatives (me, my), in the ‘evaluation’ move far outnumbers its use in the position move, which does not normally exceed one sentence.

Table (4): Distribution of “I” across the Moves

Framing	Overview	Evaluation	Position
0	0	371	34

Frequency data are given in raw numbers and standardized per 1000 words for comparative purposes, rounded up or down to the nearest whole number (see Biber, 1988, p.14).

The other personal dimension noticeable in the ‘evaluation’ move is the frequent use of ‘negative’ and ‘positive’ qualitative and quantitative adjectives (e.g. difficult, lengthy, unclear, good, vague, interesting, appropriate, not enough, inappropriate, etc.). Some of these adjectives are often found to be premodified by adverbs like ‘somewhat’, ‘rather’ or ‘quite’, which have a downtoning or softening effect. Qualitative adjectives are the most common in the corpus, compared with the use of quantitative ones. Their spread may be functionally linked to the purpose of the review reports as they are mainly geared towards judging the quality of the

research reported on. Another closely linked observation is the occurrence of such adjectives in predicative positions. The justification for the frequency of such structures lies in the fact that the topic for the review report is the manuscript which is being subjected for evaluation. The noun ‘manuscript’, and other substitute nouns (synonyms) such as, ‘the study’, ‘the article’ and ‘the research’, occupies the theme slot and the reported information comes in the rheme position. This structure seems to impose the use of predicative adjectives on report writers.

The evaluation move is also heavily populated with modals and lexical verbs expressing necessity (e.g. must, should, is needed, is required). Besides, certain catenatives, notably ‘fail’, ‘overlook’ and ‘avert’ are used, in the present simple tense, by some reviewers to express negative evaluation. Also, lexemes of semantic negation (e.g. less and little) are found to recur in this move. Another evaluation signal that announces negative remarks is existential ‘there’ followed by copula verb (Be) in the singular or plural form. The following is an example:

Example 83 (Report 1)

There are a number of grammatical and spelling errors that I have pointed out in the manuscript itself.

To summarize, we do not find the use of the first-person in itself to signal subjectivity. Neither do we assume that subjectivity is avoidable in an evaluation move. Instead we see it as an unavoidable and transparent means of taking responsibility for what is after all the reviewer’s primary role of evaluating (Nunn et al., 2018). We also assume that the editor will in turn evaluate the reviews before making a final decision, given the inevitable bias of each evaluative review. The editors’ mediation is therefore vital in that it minimizes the bias of single reviews, potentially providing a third less biased view of the paper.

11. Move Analysis

The question of how the moves are signaled now arises. In the following sections we will deal with each move in turn.

11.1. Signals of Move 1: Framing

The framing move was defined to be the introductory remarks of the letter that prefaced the body of the letter, and the frame was set apart on its own. In this move, the writers explain the reason of their writing: to review a specified research manuscript. This move, which is very explicitly stated, is a type of an advance organizer.

Example 84 (Report 2)

A Review of (title of manuscript)

Example 85 (Report 21)

Referee report for (name of journal)

Title of manuscript

Example 86 (Report 6)

Comments on the research article entitled (title of manuscript)

11.2. Signals of Move 2: Overview

As this move is infrequent and only presents a brief summary, sometimes in the form of a verbatim quotation, of the manuscript, we will skip it and turn our attention to the other moves.

11.3. Signals of Move 3: Evaluation

This move and its steps are almost always accompanied by textual cross- references (i.e. anaphoric reference) to sections or parts of the preceding text in the report (see example 32 above) and references to specific points, paragraphs, or sections in the body of the manuscript itself. A distinguishing feature of the latter type of reference is the use of page numbers to refer the reader to specified pages and, sometimes, quoted extracts from the manuscript (see examples 68, 69, 70, 72, 73, 83 and 89). References to specific pages in the manuscript and bringing in quotes are signals for negative evaluation. They are important also because they underline the evidential basis for the potentially biased interpretation.

11.4. Signals of Move 4: Position

This move concludes the report and, in the majority of cases, expresses the writer's position in an overt speech act recommendation. That is, it makes explicit to the reader what speech act is being

performed in the text through what Vande Kopple (2002) calls ‘illocution markers’. Such markers may include, ‘we conclude’, ‘we recommend’, ‘I consider’, ‘I feel’, ‘I think’ etc., followed immediately by ‘evaluative that’ (Hyland & Tse, 2004).

This move also contains anaphoric and cataphoric references to the revisions recommended (see ‘evaluation’ move above). Concessive conjunctions (e.g. ‘however’, ‘nevertheless’, ‘despite’, ‘in spite of’) and conjunctions of result (e.g. ‘therefore’) represent distinguishing signals for this move in the case of ‘conditional publishing’. Such conjunctions are used not only to glue the text together, but also to enhance the propositional meaning. Through them, reviewers both signal a textual relationship to preceding discourse and indicate an interpersonal relationship to the reader or the position being taken. Pertinent to the use of conjunctions is the use of structures of condition (e.g. ‘provided (that)’, ‘on condition that’, ‘once’, ‘if’, ‘after’), all of which express the required actions on the part of the manuscript writer. It seems that the use of structures of condition imposes on writers the use of anaphoric and cataphoric references to refer, once again, to the revisions upon which the publishability of the manuscript hinges.

We also observed that the modifier ‘above’ and the prepositions ‘on’ and ‘in’ are two major components of the category of ‘conditional publishing’. Expressions that carry out a summative and concluding function such as, ‘on the whole’ and ‘all in all’, are also signals of the ‘conditional publishing’ category. Examples of the different realizations of this category are:

Example 87 (Report 4)

I consider the article publishable, with such other revisions as I have indicated on the manuscript, only after any possible borrowing on pages 5 to 9 has been acknowledged.

Example 88 (Report 6)

I, therefore, recommend that this paper be published once the minor comments I made are dealt with.

Example 89 (Report 19)

Despite the above remarks, this paper is publishable provided that the author makes the necessary amendments.

Example 90 (Report 21)

On the whole, I think that this paper is publishable provided that the comments/suggestions made are properly investigated by the author.

Example 91 (Report 35)

However, I feel that once these changes have been implemented, the paper will be acceptable for publication.

12. Limitations of the Study and Suggestions for Further Research

Before concluding the study, it is important to outline its limitations. First, the corpus examined is not representative of all the subgenres of peer-review reports in all academic disciplines. Therefore, the results can by no means be generalized to other corpora in other fields. Nevertheless, the framework used here may form a basis for other investigations. Second, the study is based only on the textual evidence supplied in the corpus. A more practical approach may be to interview some reviewers and question them about points raised in this research. Third, the data used for this study were not controlled for the report writer's nationality or gender as we now recognize a hidden assumption that all reviewers would conform to the conventions of the academic society they belong to. Future research would need to test this assumption.

13. Conclusion and Recommendation

This study presented the results of a genre analysis of reviewers' reports on research manuscripts submitted for publication consideration in refereed journals. Sixty-four reviewers' reports were examined in terms of their schematic structure. The component moves were identified and the linguistic features pertinent to the moves and the steps used for their realization were highlighted. The analysis showed that the primarily evaluative nature of the reviewers' reports, and the unavoidable potential for bias explains the writers' transparent use of the first- person writer pronoun ("I"), qualitative adjectives and premodifying adverbs. We observed a common link between the reviewers' comments and/or remarks and the final decision provided in the 'position' move. That is, the more questions a reviewer raises, the less favorable the decision is going to be, and the more suggestions for improvements are given, the more positive the 'position' move is going to be.

On the basis of the analysis, we would like to conclude this study with the following recommendations:

- a. It is interesting to note in terms of genre analysis that the central move (evaluation) is the least conventionalized in nature. We need to exercise care before labelling moves as obligatory. While we have, for example, labelled identifying shortcomings as ‘obligatory’ above, we also note that this is only because of their frequency in this corpus.
- b. Academic publishing journals may consider providing prospective reviewers with a review template that contains all the essential points/issues reviewers should make comments on. Such a procedure will guarantee consistency in the review process and minimize disparities.
- c. Reviewers’ comments should be specific, concrete, to the point, and detailed. Reviewers are advised to avoid such generalizations as *more references are needed*. It is recommended that they specify what kind and where the text needs citations to back it up. If possible, they may even give the author a list of the references they would like to see included and say why. Also, vague expressions such as, *more information about the subjects is needed*, should be avoided. The author should be told what kind of information (for example, age, sex and education) is missing.
- d. Reviewers are advised to avoid expressions such as *some of the sentences are unclear and awkward*. They should be more cooperative and tell the author which ones.
- e. Also, the more specific the suggestions for revisions are, the easier it is for the editors to determine whether those revisions have been made once they receive the revised manuscript.
- f. The editor should not just return potentially contradictory reviews to authors. Given the inevitable element of bias built into an evaluation move, the editor has an important role to play in mediating across reviews.

- g.** Authors should be given the opportunity to counter evaluative comments that are not supported by evidence.
- h.** Instructions to reviewers these recommendations, making it clear that there are acceptable alternative approaches to evaluating papers (see appendix 3).

Finally, reviewers may be critical, but they have to be constructive. It is laudable that they are transparent in expressing what they thought, and note what they liked or did not like, but they need to explain why they liked or disliked something to facilitate the editor's job and to help the author address or counter a comment. A reviewer cannot simply say "I like this" or "I dislike this." These types of comment fail to provide either editors or authors with anything useful to work with, and defeat the scholarly purpose of a peer-review.

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Appendix 1

Samples of Pre-designed Reviewers' Reports

Sample (1)

SPECIALIST READER'S REPORT

TITLE:

1. Is the topic or problem investigated in this paper clearly identified? Describe.
2. Is the rationale for the study clearly described?
3. Does the author provide clear and appropriate links between the topic under investigation and other work in the field?
4. Are the research sources identified, and ideas and information drawn from previous research properly attributed?
5. Does this study employ an appropriate research design? Where statistical procedures are employed, are they used appropriately?
6. Do the conclusions drawn from this study follow logically from the evidence and argument presented?
7. Does the discussion accurately reflect the results of the study? Does it deal appropriately with the questions raised by the research?
8. Are the limitations of the study appropriately described?
9. **ADDITIONAL COMMENTS.** (Comment as necessary for each area.)
 - A. Abstract
 - B. Introduction/Literature Review
 - C. Purpose/Rationale
 - D. Design and Methods
 - E. Results (including statistical tests/analyses)
 - F. Discussion/Conclusions
 - G. Tables, graphs, diagrams
 - H. Notes/References
10. **Recommendation**
 - A. publish as written
 - B. return to author for minor revisions
 - C. reject/return for major revisions
 - D. other (specify)

Reader

Date

Appendix 2

Dear Professor (name),

We are now able to send you two reviews of the manuscript you submitted to the journal of (name of journal) and manuscript title). You will see that both reviewers see value in the paper and recommend that you revise and resubmit. If you decide to do this, the paper will be sent to review again.

Looking at Reviewer 1's comments, the most significant need identified for you to address seems to me to be clarification over your methods and analyses; the lack of attention to Research Question (e.g. the second research question is not properly addressed as you can see from Reviewer 1's comment) is also noted. Also, clarification is certainly needed over how much teaching of these strategies has occurred. There is much agreement in Reviewer2's comments, particularly in seeking fuller data display and more detailed analyses. This reviewer also questions whether the data here are naturally-occurring or in effect artificially forced out of a specific-set up situation. If you decide to resubmit and are able to do so, your paper would be reviewed and if reviews are positive it could be considered for publication.

Thank you for your interest in (name of journal)

Sincerely,

Name

Editor

Appendix 3: Reviewer guidelines: Asian EFL Journal

1. A submitted paper is first received by the CEO of AEJ and the sister journals who screens out inappropriate or incomplete submissions, communicates with authors to acknowledge or reject and sends the retained papers to the appropriate journal.
2. The CEO sends the paper to the SAE (Senior Associate Editor) in charge of screening.
3. If it passes these two screening stages (currently slightly less than 50% of papers are retained for review), it is sent to an AE (Associate Editor) who supervises the full review. At this stage, the SAE and/or the AE will also identify the paper as a research piece, a teaching section piece (TA), as a non-research piece or as an alternative voice piece. All require a different kind of review.
4. It has always been AEJ policy to encourage alternative approaches to academic writing. Well-documented discussion pieces, pieces which have a strong, possibly first-person, authorial voice are also welcome and should be reviewed in their own terms. Reviewers should be encouraged to focus on basics of competent writing, relevance, appropriate support from literature (not always required), argumentation, quality of evidence and to look for quality beyond generic structure. We do not want to reject or accept articles simply because they do or do not conform to basic generic patterns suitable for reporting experimental studies. We do not currently accept enough qualitative studies. They are rejected too often because they do not conform to experimental study norms.
5. The AE starts the review process and takes responsibility for most of this process, sending each paper for review by two editors. One of these can be the AE. In the current system each AE has a team of about 5 reviewers who only review for that team. The AE distributes the papers for review equally among team members.
6. When reviews come back, AEs must make an initial decision.
 - a. Recommendations for rejection or acceptance with supporting comments and reviews go to the Chief Editor for confirmation. The Chief Editor makes a final decision and communicates the decision to the author.

- b. Papers needing revisions. AEs resolve any contradictions between reviews and communicate directly with authors asking them to make the changes and resubmit. Authors must label replies as “resubmissions” in the message and attachment titles to avoid confusion and resubmit directly to the AE. AEs try to be very clear about what authors must do, especially, but not only, in cases of contradictory review.
- c. When resubmitted papers are recommended for rejection or acceptance they are sent to the Chief Editor as in (a) above.
- d. Insist on APA format for referencing - please be strict on this. Do not send a paper recommended for acceptance until APA referencing problems are fixed. We would also like articles to reach us with lay-out, typos, language problems already edited out before we accept. Each team should do its only initial proofing before recommending a paper for acceptance.
- 6. In problem cases, please ask the Chief Editor to intervene.
- 7. Accepted articles are filed for publication by the Chief Editor and sent to copy editors six months before publication dates. The Chief Editor also writes a foreword.
- 8. For quarterly issues 2 Associate Copy Editors proof and page each submission and communicate with authors for last minute editing, missing references, etc.
- 9. The proofed issue is returned to the CEO about a month before uploading. The CEO, who is also the online editor, prepares the HTML version and uploads the issue on or around the first of the issue month.
- 10. Some articles will be fast tracked or commissioned for various reasons. Usually AEs are asked to review these themselves.
- 11. Articles from our own editors are welcomed. They will go through normal review.
- 12. New reviewers with little reviewing experience may be asked to take part in training aimed at developing and monitoring the quality of our review process.



The Evaluation of an English for Specific Purposes Course Taught to Pre-Sessional Undergraduate Students in Tandem with General English

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Abstract

This paper describes an action research project undertaken to assess an English for Specific Purposes (ESP) course, and a General English (GE) course, conducted to pre-sessional undergraduate students at Imam Abdulrahman Bin Faisal University, Dammam, in order to maximize the project's validity and reliability. Data was generated from interviews with 11 students, 6 focus group discussions, 14 classroom observations, 241 questionnaire results, 12 examples of the students' writing, and 27 transcripts, as well as 745 students' graded papers. Analysis of the data concludes that conducting the courses in tandem does not discriminate against the students with less of a command of the language, but, in order to maximize the procedure's effectiveness, students undertaking the course do require a certain level of command of the English language. Therefore, it is recommended that streaming is undertaken, with this cohort benefitting from a prolonged initial focus on GE. In addition, the language should be viewed as being on par with course content, with the needs of students being met through a constant procedure of analysing the material to ensure its relevance. Finally, the teachers should be provided with training in the teaching of ESP.

Keywords: classroom, courses, ESP, General English, teaching

Introduction

The importance of English in academia cannot be overlooked due to its role as the lingua franca of science and technology. For example, Master (1998), and Swales (1985), commented on 50% of research papers being in English even 30 years ago, while, more recently, the research conducted by van Weijen (2012) discovered that approximately 80% of all the journals assessed are in English, with papers in the natural, theoretical and hard sciences leading the field with regard to sheer volume.

English for Specific Purposes (ESP) is a branch of English Language Teaching (ELT) and a form of English language input for non-native speakers which aims to meet learners' particular requirements. It makes use of the strategies and activities of the discipline in question (Dudley-Evans & St John, 1998), in a classroom that is lively, interesting and relevant, as a failure to achieve this would have a negative effect on the participants in their education, or their place of work

(Hutchinson & Waters, 1987). Consequently, it is an aspect of education which requires integration, as opposed to marginalization (Ding & Campion, 2016).

ESP language input differs from General English (GE) with regard to grammar and lexis, as does the means of presentation. The former supports students' reasons for learning, with courses designed for those at a tertiary stage institution of intermediate or higher level. This means it is more focused, practical and object-oriented than GE (Dudley-Evans & St John, 1998), and requires the teacher to not necessarily have the same skill set for the teaching of GE, which can make it problematic to teach (Hamp-Lyons, 2001). Differences include a focus on content, as opposed to delivery in GE, teachers' inadequate subject knowledge, and the focus on critical thinking (Alexander, 2007), which reviews, evaluates and revises previous thinking to solve problems (Stratton, 1999). Consequently, it can cause issues with attitude, concept, linguistics, methodology, and organization (Campion, 2016), especially as ELT qualifications tend not to meet the needs of conducting training in ESP. This is with reference to the University of Cambridge's CELTA (Certificate in Teaching English to Speakers of Other Languages), let alone the DELTA (Diploma in Teaching English to Speakers of Other Languages) (Martin, 2014).

To compound the issue, the lack of available ESP literature has been commented on, as has the extent of the procedure in order to become a successful tutor not just in GE (Campion, 2016). Though this comment refers to English for Academic Purposes (EAP), we are of the belief that it is equally valid for ESP, if not more so.

It is apparent that the ESP lecturer has to perform a variety of roles. These include conducting discipline-specific research (Terraschke & Wahid, 2011) and preparing students in the academic context for the multi-faceted challenges they encounter when they start their working lives (Fortanet-Gomez & Raisanen, 2008), as well as the challenges of their undergraduate courses. Overcoming such issues could involve collaborating with non-ESP lecturers, meaning an ESP teacher has to be well trained and flexible to cope with such specific needs. For example, providing practical linguistic skills to enable professional tasks to be undertaken, as well as equipping learners with skills for their future careers (Potocar, 2002).

Literature Review

On the topic of methodology, there is the belief that ESP language should be discipline specific, and integrated into the content so as not to hinder academic performance, with the communicative approach implemented in order to accomplish meaningful discipline-based tasks which meet needs (Arno-Macia & Mancho-Bares, 2015), and are student-centered (Foran-Storer, 2007). Such an approach would implement learner centered tasks, including problem solving activities. On top of this, it is stated that aiding participants to develop the skills associated with language learning should also be utilized, including skills related to their discipline.

However, shared L1 can mean the lack of need to make an effort for comprehensibility, or to be concerned about accuracy. This is because of the option of resorting to the students' mother tongue in this context, as the student body is homogenous in nature, all being native Arabic speakers. This can also be the case if the teacher shares the same language, an issue particularly germane when the proficiency level is low, as observed in Catalanian Accounting and Law classes by Arno-Macia and Mancho-Bares (2015). They also comment on the fact that it is essential that content is based on genuine and relevant communicative needs in order to maximize the students' effort in the production of comprehensible and accurate language, while preventing the use of their own language.

Student ability is another issue, especially those of a low level, as it can result in a dilution of content (Crandall & Kaufman, 2002), a factor Agronomy students were not prepared to undergo in the research conducted by Arno-Macia and Mancho-Bares (2015). Furthermore, many view ESP as being problematic, due to comprehension issues arising from a lack of knowledge of the appropriate lexis (Hu Hsueh-chao & Nation, 2000). Consequently, these issues need addressing, and Arno-Macia and Mancho-Bares (2015), comment on doing so with the inclusion of a preponderance of visual support, as well as the acceptance of using L1, as was the case in the aforementioned agronomical context.

However, some courses do not take student level into consideration and advocate mixed levels (Yogman & Kaylani, 1996), though they advocate a threshold for content related activities as lower level participants were found to be over-reliant on their peers, or simply not participative in activities, especially ones of a communicative nature. This is a view supported by an advanced

level student who said in written feedback that “*The first level should be lower, beginners struggle...*”, and a teacher, who said about this cohort, “*It can be difficult to help them catch up*”. This means there is a tendency to cater to the lower level students, which results in the demotivation of students possessing a better command of English.

As motivated lower level students prepared to take risks were found to benefit when paired with higher level learners, task based skills classes across levels was the procedure implemented, focusing on language, and skills in general, in contrast to providing individual skills lessons, with an emphasis on speaking. Furthermore, learner training was also undertaken to justify the input, as some students on previous courses had been found to be unfamiliar with the activities presented.

Though ESP can be seen as challenging, especially regarding communication, courses such as English for Medical Purposes (EMP) have proved to be effective in a number of instances. This was the case with regard to the project conducted by Wette and Hawken (2016), and similar consequences are hoped to be the case after the implementation of the findings of this research.

Even if a limited number of ESP studies have measured gains in knowledge and ability, Ferguson (2012) shows how short courses, and even their longer equivalents, can have a positive impact on vocabulary and language, as well as, to a certain extent, communicative competence. Indeed, a lack of relevant vocabulary is an obstacle to student success making it an integral component of such a course (Cushing Weigle & Malone, 2016), and the key to academic success (Nation, 2013). As a consequence, lexis should be contextualized, and recycled, with the students being provided with the opportunity to actively engage with the relevant words and phrases (Stoller, 2016).

Regarding such courses, the presentation of relevant work-related vocabulary, and formulaic speech, should be focused on due to their usefulness. Initiating statements, questions, responses and polite forms, which can be used in social situations, and the exchange of information should also feature. This means the second year of the program saw an increase in emphasis on these skills, as well as the projects being conducted across classes and levels. Different courses do require different foci, however, in order to meet students’ needs (Tomlinson, 1998), with Parette and McNair (2008) advocating multiple communication intensive courses and projects with real and global audiences, which require communicative, as well as technical expertise.

Despite this, different individuals, courses and institutions having different requirements should be taken into consideration. Therefore, courses should be meaningful due to the pragmatic need of studying in an environment with minimal stress, as advocated by Krashen (1981), and slightly above students' language levels, in order to maximize enthusiasm. This lends itself to Dudley-Evans' claims that ESP should be offered at an intermediate or advanced level, and exploit authentic learning material (1997), as well as learning strategies being covered (Carver, 1983). With reference to stress, one teacher in his/her questionnaire commented on this being an issue, due to the students being "overburdened and exhausted" due to a workload of 5 contact hours a day, as well as e-Learning hours. Also, while Krashen (1982) believes input should be slightly above students' language level, creating an environment with minimal stress, the lexical items are far more advanced than this, with even the authors being unfamiliar with numerous items.

As learners have a specific interest in learning subject matter, they should be motivated and interested in ESP (Sifakis, 2003), as it will be worked on in their careers, and/or during further study. However, as the large majority of students do not have work experience in their field of study, they are unaware of the language skills which they will need to utilize in their chosen careers. Thus, the input is decided upon by the instructor who is often not an expert in the students' specialties, and should not be expected to be so (Dikilitis & Griffiths, 2017). Even so, it should be assumed that students are motivated in order to succeed, and be well disposed to focus on the subject-matter, in theory, leading to successful acquisition.

Though the role of the ESP lecturer can be stress-inducing, due to the objectives of the courses, and the students' command of language, or lack of, Champion (2016) states that once it is begun to be taught, the usual outcome is the awareness that it is not found to be radically different from other types of EFL teaching. Having said that, she still advocates time for professional development, such as by conducting peer reviews and liaising with subject teachers, and the provision of clear, detailed information regarding their role, as developing in it is claimed to be a "limitless process" (p68).

An understanding of the subject matter being taught is needed, as, usually, the role of material designer and developer goes with the territory, and is why Swales (1985) refers to 'ESP practitioners', as opposed to 'ESP teachers'. On top of this, negotiating with the subject specialist is another role needing to be undertaken. This is due to the tendency of publishers to neglect this

small client base (Hutchinson & Waters, 1987), especially if the students enroll on a course Bocanegra-Valle (2010) believes to be minor. If this occurs, it is an unfortunate state of affairs because materials are particularly useful in the ESP context as they play a key role in exposing learners to a particular discipline's language as it is actually used, making them a source of "real language" (Dudley-Evans & St John, 1998: p.171).

As advocated by Tomlinson and Masuhara (2017), this involves the exploitation of authentic texts in order to prepare learners for language use outside the classroom, with rich and meaningful exposure to it resulting in language acquisition. However, Hutchinson and Waters (1987) are of the belief that various text types will be required at different times, with input fit for purpose being more germane than its authenticity. They also claim that methodology is more relevant, with lessons needing to be interactive and enjoyable.

However, this doesn't always occur. For example, on an ESP program in Spain, Aguado de Cea and Curado Fuentes (2102) commented on numerous issues, including the lack of ESP input due to the absence of specialist course books, an issue compounded by the lack of development of suitable, appropriate material. The other issues were overcrowded classrooms, mixed ability participants on the same courses, and a large diversity of disciplines being catered for along with their specialist lexis, which was not exhaustive, meaning such courses do not provide students with the opportunity to focus on ESP.

Ideally, the requirements of the workplace should be addressed, with input developed in collaboration with content lecturers, as recommended by Bhatia (2011), in order for classroom input to directly connect with the world of work the students will experience, but which the ESP tutor is unfamiliar with. Therefore, there is a need to evolve and expand ESP input to focus on context and interaction (Upton, 2012), not just lexis.

Learning strategies should also be covered, including autonomous vocabulary building, as there are too many lexical items to teach. Though this makes incidental learning integral, material should transcend language to include critical thinking and study skills, with the students also being made aware of the limited role of memorization, and the consequences of plagiarism (Stoller, 2016).

The lack of ESP focus is an issue exacerbated due to the limited availability of external options, as language school courses tend not to focus on this, which has been the case in institutions the

authors have worked in. This means students are unlikely to have been introduced to the content of their discipline, or have practiced language for future professional use in their studies.

Furthermore, as well as working in various socio-cultural and ideological contexts, teachers also tend to have different educational backgrounds, ranging from the highly qualified to the unqualified, on top of the likelihood of a combination of native and non-native speakers being in the same staffroom. Despite such variables, there is no connected community for mutual benefit, nor the widespread provision of professional development (Hamp-Lyons, 2011), even though there are no qualification requirements for entering the profession. For example, only a limited number of MA programs provide input on ESP, let alone EAP, meaning limited opportunities are provided to become qualified, despite teachers potentially providing input on pre-sessional, in-sessional, credit bearing, and content-based courses, with content ranging from generic skills to extremely specific input.

With regard to subject matter, teachers should not always have to deal with texts they have little knowledge of, with Hutchinson and Waters (1987) claiming that highly specialized texts do not need to form course content. If the focus is on grammar, for example, there is no concept of *Grammar for Specific Purposes*, meaning that input can reflect teacher knowledge, a realistic procedure if the teacher has influence on syllabi. For example, the passive voice is prominent in science texts, but this does not mean that subject specific texts are required for input on this structure.

To exacerbate the issue, teachers can be conducting large classes, and have a heavy teaching load with limited support and resources, with there being no opportunity to undertake professional development, let alone having undergone training to conduct such courses in the first place. This means many are ill-prepared when entering the ESP classroom (Hutchinson & Waters, 1987).

The Competency Framework for Teachers of English for Academic Purposes (CFTEAP) guidelines for the UK, for example, includes generic EFL qualifications, despite their appropriateness being questioned (Sharpling, 2002). However, in their defense, this could be due to the limited number of specialist courses on offer.

There is a tendency for students to have an issue with specialized, or context specific knowledge they are exposed to in ESP, and this can also be the case with teachers, who, due to the dearth of

formal training, appreciate informal learning, such as collaborating with subject specialists (Martin, 2014). According to Turner (2004), this scenario is seen as being preferable to being marginalized, intellectually vacuous and only catering for weaker students.

With reference to lexis, those which are structural, general and sub-technical do not vary with topic. Even though technical ones do, the variation is limited with Inman (1978) calculating them to account for less than 10% of the total. It is also claimed that these are often internationally known or can be deciphered because of subject knowledge and word roots (Hutchinson & Waters, 1987).

The aforementioned collaboration includes working on the linguistic and (inter-)textual content of ESP modules in undergraduate and postgraduate courses, and on the provision of adequate reasoning mechanisms that help learners to understand specialized discourse (Paltridge 2009). It also explores ESP contexts outside the EAP settings, to expose students to workplace requirements (Bhatia, 2011). Unfortunately, though, the lack of subject knowledge has led Belcher (2012) to claim that their own community is the one ESP professionals know the least about.

In the testing procedure, written assessment is integral, with 77% to 100% of academic courses analyzed in EAP implementing this procedure, even though they only measure a section of the required language (Cushing Weigle & Malone, 2016). In contrast to GE tests, the ESP equivalents cannot be produced and repeated en masse, as they are task-related, context-related, and specific (Jacoby & McNamara 1999), meaning an awareness of the learners' needs is required (Douglas, 2000), as well as a resemblance to real life situations.

By definition, ESP tests vary by discipline, and involve a high level of language specificity, meaning that precision should be integral in such tests, and mirror target language use. To ensure validity, it is believed that their development should be after an analysis of the context and tasks in target language use situations, with content containing communicative activities and purposes, as well as linguistic features, which replicate the learners' future workplace (Hamp-Lyons & Lumley, 2001). Therefore, they should not focus on general proficiency with the addition of some specialist lexis, but replicate the workplace, with the skills to be tested covered in classroom input. Finally, assessment should be based on the ability of the learners to communicate to achieve their

aims in situations and activities which meet their professional needs (Sanchez-Reyes Penamaria, & Torregrosa Benavent, 2012).

Unfortunately, research has found that tests can lack quality and meaningfulness, as well as being unreliable (Alderson 2009), as was the case in the aviation industry (Read & Knoch, 2009). To confound matters, tests can be used inappropriately, such as IELTS being used for the evaluation of nurses (O'Neill, Buckendahl, Plake, & Taylor, 2007) and the registration of health professionals in New Zealand (Read & Wette, 2009). Consequently, Douglas (2000), recommends that in order to use a test for the purpose it was not developed, empirical evidence must show that the procedure is valid, as they can also be used for unethical purposes (Messick, 1989).

Also, tests, as with content in general, should be constantly analyzed, and modified. Post-development, an integral part of the procedure is reviewing and revising the materials developed for this, as well as their piloting and statistical analysis in order to determine suitability (Hyland & Shaw, 2016). For example, the Test of English as an International Language (TOEIC) introduced speaking and writing, to complement its existing reading and listening tests, due to the concern that those succeeding in the test remained inadequate in their overall ability to communicate (Powers, 2010).

Written assignments that replicate workplace tasks should also be integrated (Garay & Bernhardt, 1998), with feedback engaging learners in critical thinking, not simply focusing on sentence level editing (Bean & Weimer, 2011). Though assignments vary, they have been found to be most engaging when 'meaning-making' (pp.299) is required (Anderson, Paine, & Gonyea, 2009). This involves the development of deep analysis and the conducting of original research, or, applying course concepts to new situations, thus, connecting critical thinking and writing, as opposed to the communication of existing facts.

A key aspect is *transfer*, the teaching of skills and knowledge students can adapt and apply to other situations (Counsell, 2011), while Wardle (2009) comments on focusing on writing about writing, as it enables students to adapt to different writing tasks required in academia. However, an issue with this procedure is that disciplines have varying conventions and requirements, meaning that students cannot be prepared for all of them, especially if classroom time is limited.

Therefore, assessing ESP is a distinct branch of language assessment in general. This is due to its concern with the ability to use language precisely in the performance of tasks which replicate the future workplace, while integrating appropriate background knowledge.

Rationale

This project, assessing the effectiveness of the in-house ESP course, needed to be undertaken, to avoid, as Swales et al (2001) claimed, the tendency to overlook the issues associated with ESP. Previous ESP studies have been undertaken, but in dissimilar contexts to the one in question. For example, Arno-Macia and Mancho-Bares (2015) undertook observations of teachers lacking English proficiency, as well as confidence, which they found to have a negative effect on methodology. For example, a limited use of group-based activities were undertaken, a problematic scenario as Wette and Hawken (2016) emphasize the need to make such courses communicative and discipline specific.

Another action research project commented on classes with only 15 students (Yogman & Kaylani, 1996), with the most proficient only being at the intermediate level. Dictionaries and grammar guides, as opposed to course books, were the sources of input over a 4-week period, with output dominated by Business English projects. It also refers to the issue of obtaining the students' levels of proficiency, with test scores not being utilized due to the belief that they are an unreliable source. However, these scores are used to develop curricula despite the authors claiming that there is a need to meet learner needs and find a happy medium between input and the expectations of the various groups with "a stake in the program" (pp.311).

As well as the materials developed and presented, Hutchinson and Waters (1987) believe that for a program to be regarded as successful, an integral component is assessment. This should encompass the effective use of target language, with feedback on how performance can be improved for the student body, and how the experience can be made to better suit their needs.

Furthermore, post-course evaluation should take place to make continuous improvements to the material. As Tomlinson (2003) states, material should not be seen as a final product, but should continuously evolve to improve and be more suitable in meeting students' changing needs. Ideally, students should select topics relevant to their interests which motivate them to learn relevant words, phrases, and grammar, ensuring meaningful input and the meeting of their needs

(Tomlinson, 1998). However, as previously mentioned, this was not the case for all of the course participants.

The implementation of such a course raises issues related to how the academic year for pre-sessional students is divided, and the content of the syllabi, as well as the student body and how the classes are allocated. This is particularly true as the existing research was conducted in dissimilar contexts, as well as the contradictory nature of the academic literature available regarding the most effective method of instructing such students, and the obstacles faced during the process. This research was therefore undertaken to determine the similarities and differences between the teaching and learning of ESP and GE on the Preparatory Year Program at Imam Abdulrahman Bin Faisal University, with the aim of maximizing its effectiveness.

Methodology

Context

The course in question is English for Specific Purposes (ESP) at Imam Abdulrahman Bin Faisal University, Dammam, located in the eastern province of Saudi Arabia. The university conducts all its courses in English, with the exception of *Sharia and Law*, and *Applied Studies and Community Services*. To facilitate this, the Preparatory Year Programme was initiated in 2008, when it was a part of King Faisal University, the year before it became an autonomous institute. It is designed for pre-sessional students and runs in tandem with General English. The similarities and differences between these courses for the same cohort conducted by the same teachers were chosen for evaluation due to the lack of availability of relevant information on similar ones.

Though research has been conducted on the role of ESP, such as by Yogman and Kaylani (1996), the context has always been different due to the plethora of options available at various institutes around the world. To add to the confusion, differences of opinion regarding their effectiveness also prevail. For example, the aforementioned Yogman and Kaylani (1996) implemented a task based approach on a short 4-week Business Management Information Systems program. Furthermore, classes were small, with 15 students from beginner to intermediate, as well as dictionaries and grammar guides being exploited, as opposed to a coursebook being taught on a longer course, to a larger cohort.

Therefore, there was felt to be the need to validate the provision of ESP to mixed level students in the second of 2 12-week semesters, for a total of 48 hours. Classes are comprised of up to 50 students, with lower level students catered for, as advocated by Tomlinson (1998), with activities conducted in groups, whenever possible, in order to reduce formality and inhibition.

In reality, though, lower level students experienced issues contributing to many of the activities presented, so, for mixed ability classes, the belief was that there is a threshold to prevent the scenario of lower level students relying on classmates' translations, or simply not participating. However, lower level students prepared to take risks and contribute in a classroom with various activities, have been found to benefit when paired with higher level learners, as they are motivated to attain their peers' level (Millan & Joyce, 2011).

Consideration was also given to the amount of ESP input in relation to General English, as well as the form of input, and the students who comprised the classes, with data being generated from a variety of sources; interviews, group discussions, observations, questionnaires, student written output, and transcripts.

Participants

The students, who study for 32 weeks in 2 semesters of 16 weeks, are divided departmentally, and are then further divided into colleges. They are required to have a certain command of the language, and, in the preparatory year, are provided with input on all 4 language skills, with marks allocated to speaking skills and a writing portfolio, as well as to testing, e-learning, participation and attendance. To pass, a score in excess of 60% per course is required, though the Science, Engineering, and Health departments have the discretion to specify their own minimum grade requirements.

The only students exempt from the Preparatory Year (PYP) are those who achieve scores of 6 or above in all 4 components of the IELTS examination; writing, reading, speaking and listening, apart from Humanities, where the requirement is 5. Though these students are enrolled, they do not attend classes.

Input

The ESP course in question involves 6 hours a week, 2 of which are comprised of EAP. This input runs concurrently with a variety of GE input depending on the level; Beginners undertake 13 hours a week, Intermediate 11 and Advanced, a mere 7 in comparison. This is for the second semester, with the first being the sole preserve of General English, which exploits the *Q Skills for Success* series comprised of two books, *Reading and Writing*, and *Speaking and Listening*, which are produced by Oxford University Press.

In contrast, English for Specific Purposes input is comprised of self-developed courses, such as *English for Engineering Professions*, and *English for Science Professions*, which are being upgraded to their fourth editions at the time of writing. Students are required to take and pass both these courses before being permitted to enroll as undergraduates.

Data Collection

A mixed method of data collection was implemented to limit the shortcomings of using a single source, and to maximize the validity and reliability of the research in order to achieve triangulation, as advocated by Johnson and Turner (2003). This is the use of multiple methods of data collection in qualitative research to develop a comprehensive understanding of the issue under analysis. It is also seen as testing validity through converging information from different sources, resulting in more comprehensive data being obtained. The findings are strengthened due to the data's increased credibility and validity, as well as providing more insight into a topic. Furthermore, it limits the inadequacies of one source, if they exist, and makes inconsistencies more easily recognizable (Carter, Bryant-Lukosius, DiCenso, Blythe & Neville, 2014).

Data was garnered from student and teacher questionnaires, observations, focus groups, interviews and transcripts. It should be noted that the interviews were conducted in English, as opposed to Arabic, with the student body being comprised of Saudi Arabian pre-sessional students at least 18 years of age. The teachers were more multicultural, being British, South African, American and Canadian, as well as Saudi Arabian and Indian, with the nationals of the latter two possessing EFL qualifications and at least 3 years of experience. The feedback is discussed in detail in the *Results* section.

Though Lapadat and Lindsay (1999) comment on transcription, the written version of material from another medium, being routinely included as an essential part of the methodological process, it is not always utilized. Despite their observations on the shortcomings of such a method of data collection, its implementation resulted in more information being generated than would otherwise have been the case, thus validating its use. Also, as advocated by Creswell (2012), they were analyzed manually to identify the emergence of any new themes on top of those which emerged in the interviews.

With reference to focus groups, Krueger (1988) comments on them ideally being comprised of between seven and ten people, but this was not always possible. In some instances, the number was as low as four pre-sessional students due to this being the number of students who agreed to participate in what were single sex groups, due to cultural considerations. This meant the sessions varied in length, as well as the quantity of information that was generated, but were conducted in a non-threatening English language environment, and generated rich data, with more detail than would have been obtained from a quantitative survey (Gall, Borg, & Gall 1996). The focus group transcripts were also analyzed manually for the same reason as mentioned in the previous paragraph.

For the observations, the results obtained in this study varied greatly between the two people conducting them, in some instances. Thankfully, though, the parties in question were able to meet and moderate the variations. One of these was one teacher stating that every question and answer turn was noted individually in the answering of comprehension questions based on a reading, while another recorded such interaction to be one instance, irrespective of the number of students and questions involved. The data presented here consistently uses the latter interpretation.

The advantage of questionnaires garnering a large amount of data became evident with the number of respondents, whose data was quantified by software. Though such a means only provides a limited amount of information without detailed explanation, as well as some answers containing a level of unacknowledged subjectivity, this was compensated for by the other means of data collection (Ackroyd & Hughes 1981). Despite effort having been undertaken to avoid ambiguity, with hindsight, it should have been made clear that the questionnaire distributed was double-sided, as some respondents only completed the first page. The data generated by the questionnaire was analyzed statistically in order to produce descriptive averages and percentages.

Finally, in depth primary, detailed information was collected through interviews, as the relationship between the interviewer and the interviewee(s) meant that relevant issues were developed, and follow up questions were asked after initial responses had been provided. The length of each did vary, though, due to the various amount of output provided. Such a semi-structured format was implemented as interviewing has the capability to gather richer data than implementing a routine set of questions repeatedly (Richards, Ross & Seedhouse, 2012). Despite the attendees being those willing to attend from a student body of over a thousand, as opposed to ones who had been chosen due to their command of English, detailed information was provided in the majority of cases.

Thus, qualitative methods of data collection were employed which disclosed the thoughts of the respondents, as opposed to only garnering numerical data via the application of quantitative research from which numbers were applied. Consequently, with the data generated, and the application of both methods, valuable insights were derived.

Having outlined the procedures implemented in the collection of the required information, the paper shall now look at the outcome of the research undertaken. The results are divided into the data showing similarities between ESP and GE, before focusing on the differences. The implications of the findings are then covered, before conclusions are drawn.

Results

The results have been organized according to whether or not there is a similarity between ESP and GE, as opposed to listing them according to the means of generation.

The Similarities between ESP and GE

For the statistical analysis, 745 students' output was looked at from a cohort numbering approximately 1200, as not all the students' work had been published on the digital learning management system, *Blackboard*.

The results show that the students who did well in the GE exam, did equally well in the ESP exam. Similarly, the students who performed badly in one, performed badly in the other. The correlation is so strongly weighted that the statistics are 1:.982. While the average score in GE was 60.2, the

ESP equivalent was 58.7, and, the *t-test for Equality of Means* showed the *Equal Variances Assumed* and *Equal Variances Not Assumed* figures of .106 and .107 respectively, where .100 is the exact correlation. Consequently, the data suggests that running the ESP course in tandem with the GE course, as opposed to after an initial semester of only offering GE, for example, does not discriminate against the stronger, or, indeed, the weaker students.

However, it could be argued that based on this evidence, exposing the weaker cohort to input comprised solely of GE for a longer period of time before they undertake ESP would result in ESP being more beneficial and productive. A way of resolving this issue would be by re-evaluating the way the students are streamed, and exempting more students than only those who achieve at least 6 in IELTS. Alternatively, more than 3 levels could be utilized, with the highest level not having to undergo GE, scenarios which are not implemented at present.

Similarly, the 14 classes observed revealed that the teaching methodology for both ESP and GE was conducted in a similar fashion, as teacher talk accounted for approximately a third of the time in both strands. Figures for students being engaged and on task, and a positive classroom atmosphere, were also similar, despite the different forms of input, though these figures were subjectively determined. This was despite a slight variation in the amount of activities conducted, with the number in the ESP classes outnumbering those in GE in instances of pairwork and groupwork, as well as individual speaking turns. However, it should be noted that one teacher, in particular, was responsible for a large number of interaction patterns due to his policy of reseating students, and allocating ‘pods’ of 5 for some of the discussions undertaken.

A third similarity was in the teachers’ feedback. The main concerns were the need to stream the students, too much material having to be covered in too short a time, and a lack of variety of input. Teachers also commented on their implementing the communicative approach, due to employing a “collaborative learning methodology”, and an approach to project work which means “more meaningful contact with the language” (Tomlinson, 1998, pp.322-23), and the promotion of proficiency.

Another similarity was with regard to the three focus groups conducted in the faculties of Engineering, Science and Medicine with the teachers, as well as with the students. Similar comments were made on GE, which were time constraints, redundant activities, a lack of input on

writing skills, the level of difficulty for weaker students, and the lack of book based interactive tasks. Finally, there was the belief that the EAP input was redundant, due to its material overlapping with the material presented in GE.

The recurring ESP themes included the need to condense the course into a solitary term, as well as the need for the provision of more information on the numerous lexical items presented, and their constructive use. This could be because, as Cives-Enriques (2003) states, "...language learning does not occur as a result of the transmission of facts about a language or from a succession of rote memorization drills. It is the result of opportunities for meaningful interactions with others in the target language" (as cited in Tomlinson, 2003, p. 253).

Other common denominators were less of an emphasis on the test, and the level of difficulty for students without basic grammar or writing skills. Furthermore, there was an over-emphasis on memorization coupled with a dearth of creative practice activities, which promote active learning, and would encourage students to move away from rote learning, the means of input in the Saudi Arabian school system (Allamnakhrah, 2013). However, the most numerous student comments were on input being germane to their needs, such as doctor:patient dialogues, as, at present, the scenario of students from different courses being taught in the same classes doesn't allow for such a focus to occur, and contradicts the rationale for ESP being conducted. The need to cater for Interior Design, Architecture and Biomedicine students was also mentioned because, at the time of the research, they were not.

As well as the course content, the teachers are obliged to teach according to the content of the testing the students undergo, and have to pass, in order to advance to the first year of their undergraduate course, providing credence to the claim that assessment is an integral feature of a language program (Cushing Weigle & Malone, 2016). Indeed, students, in our experience, have questioned the use of supplementary material, for the incorrect assumption that it is not relevant to the test if it is not from the book.

With reference to the similarities between the ESP and GE tests, they are both 2 hours in length, with the answering of 10 comprehension questions based on a reading passage. Each question is multiple choice with the provision of 4 options, and, in both tests, there is a focus on both the macro and micro levels. For example, as well as asking for the main topic of the passage provided,

there are also questions asking for lexical definitions and finding the missing word(s) in gap fills. As many as 30% of the questions are based on discerning the meaning of lexical items, such as for *wrinkled*, despite the succeeding section being 40 vocabulary questions in 3 sections. The first section is, again, multiple choice, with the provision of 4 options for each of the 15 definitions provided, with papers tending to focus solely on scientific language, such as:

The two levels of programming languages are:

Low Level and Mid-Level → Mid-Level and Higher Level

Low Level and Higher Level → None of the above

This is followed by 15 gap-fill questions, again solely focusing on specific language. For example:

the _____ service that is new to the area...provides a high-speed internet connection.

ethernet STP coaxial fiber optic

The final section of the vocabulary test involves the completion of two paragraphs, which have each had 5 lexical items removed. The correct option for each needs to be chosen, as opposed to the three distractors. These, yet again, focus on ESP lexis, with one of the questions offering the following possible solutions: *interfaces*, *digital worlds*, *screens*, and *applications*. It is apparent that there is a preference for nouns to feature as the item required for sentence completion, as these comprise 20 of the 30 answers for the *MDPA* test, rising to 22 for the *Engineering Track Male* test.

Part 3 is also a gap fill exercise with, again, the provision of 4 options for each of the 10 sentences. However, the items tested in GE, as the name suggests, are more general in nature, featuring conjunctions for example, such as *because*, *therefore*, *although* and *even if*.

This section of the test also features the selection of the correct tense and the correct form of the verb with one of the questions providing the following options:

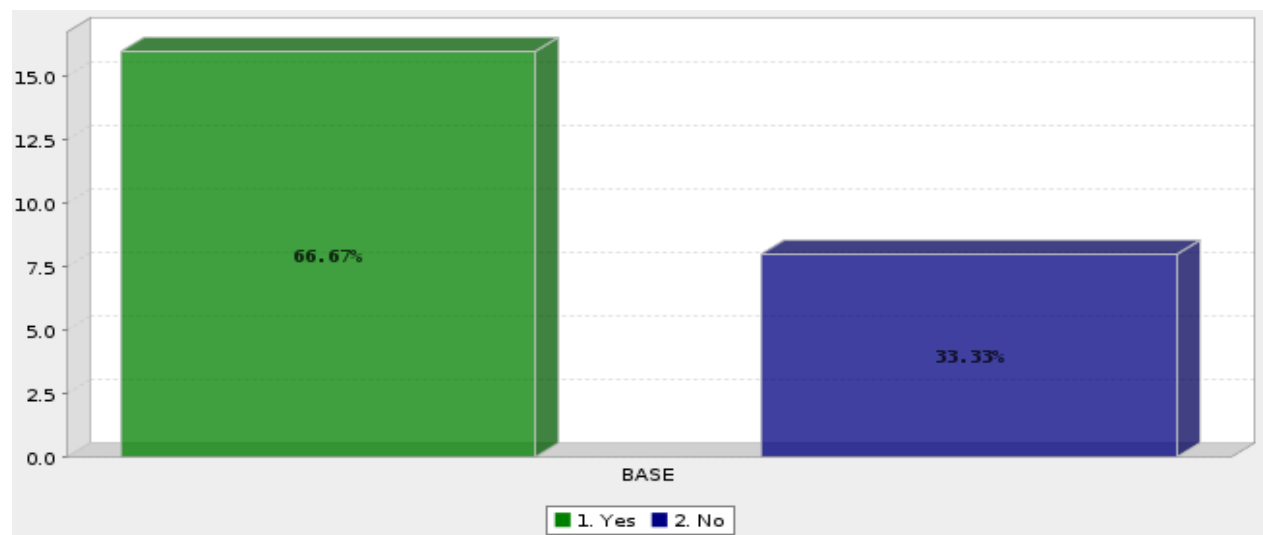
have played has played was playing has been played

Finally, it should be noted that despite different tests being provided for all departments in every semester, the format remains constant.

The Dissimilarities between ESP and GE

A lot of dissimilar data was generated by the questionnaires, which were completed by 215 students and 26 teachers. Such a figure was generated due to their being made available in both hard and soft copy, with the largest cohort being from the intermediate student body, which accounted for approximately 40% of the total. For example, two thirds of the respondents felt the balance between the two strands to be appropriate, with the minority believing there to be an imbalance regarding these. The data on the balance is illustrated in Table 1, below.

Table 1: The Balance between GE and ESP



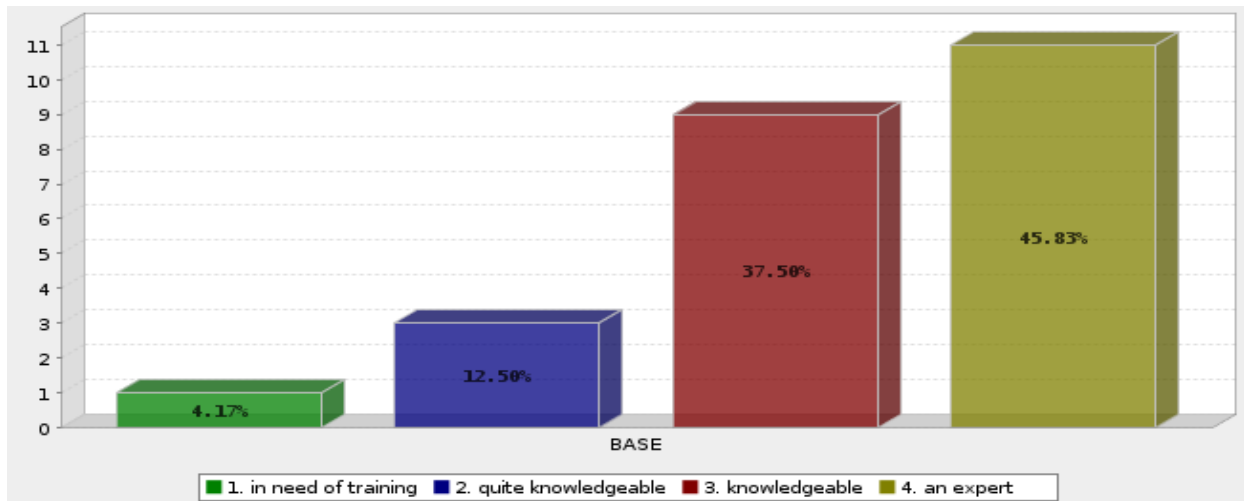
	Answer	Count	Percent	
1.	Yes	16	66.67%	
2.	No	8	33.33%	
	Total	24	100%	
Mean:	Confidence Interval @ 95%:		Standard Deviation: 0.482	Standard Error: 0.098
1.333	[1.141 - 1.526]			

Feedback on the teachers was also dissimilar as more students felt their teachers to be knowledgeable in GE, and less competent in ESP, and in need of more training in the latter. While 45% of the students felt their teachers to be experts in GE, only 29% provided the same answer for their ESP teacher.

Of the teachers who answered this question, 8 had not received any ESP training, outnumbering the 7 who had, with one having received “extensive” training from the British Council. Presumably this was the only person to have stated that s/he was not in need of any training, a figure dwarfed

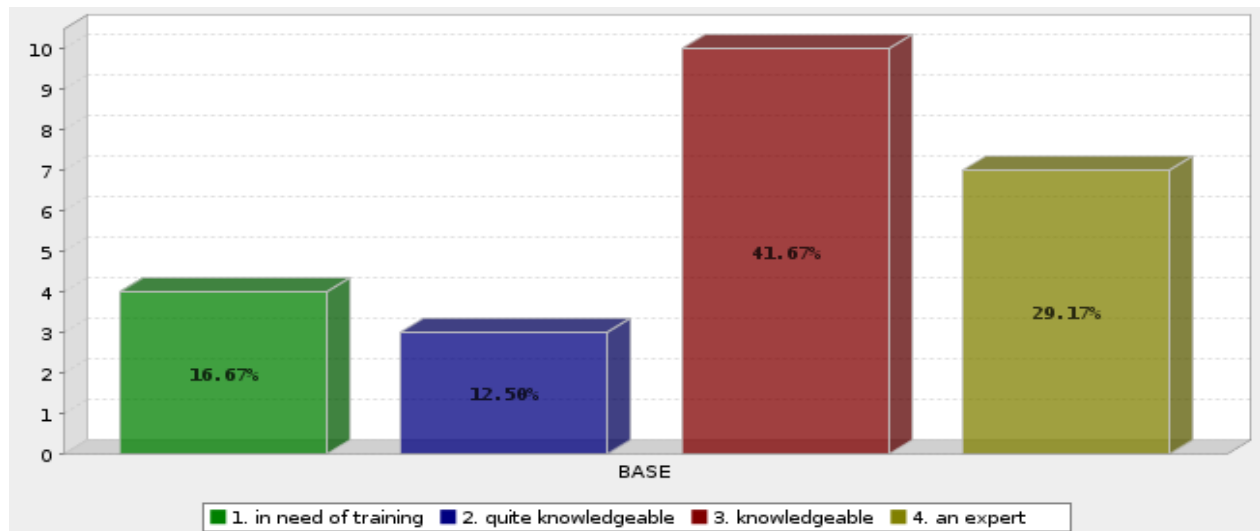
by the 7 who regarded the provision of training as being beneficial, because as one teacher stated, the “concepts are not things an average English teacher would know”, as, indeed, is the lexical input (Ding & Campion, 2016). This, indeed, seems to be an issue which is an on-going concern because, Kennedy, in the 1980s, commented on the neglect of teacher needs with regard to training (1983), while, more recently, Basturkmen (2017) referred to this as being the case despite ESP’s reputation as a demanding area to teach, with the need for additional knowledge and skills. The feedback for the teachers is shown in Tables 2 and 3.

Table 2: The Effectiveness of GE Teachers



	Answer	Count	Percent	
1.	In need of training	1	4.17%	
2.	Quite knowledgeable	3	12.50%	
3.	Knowledgeable	9	37.50%	
4.	An expert	11	45.83%	
	Total	24	100%	
Mean: 3.250		Confidence Interval @ 95%: [2.911 - 3.589]		Standard Deviation: 0.847 Standard Error: 0.173

Table 3: The Effectiveness of ESP Teachers



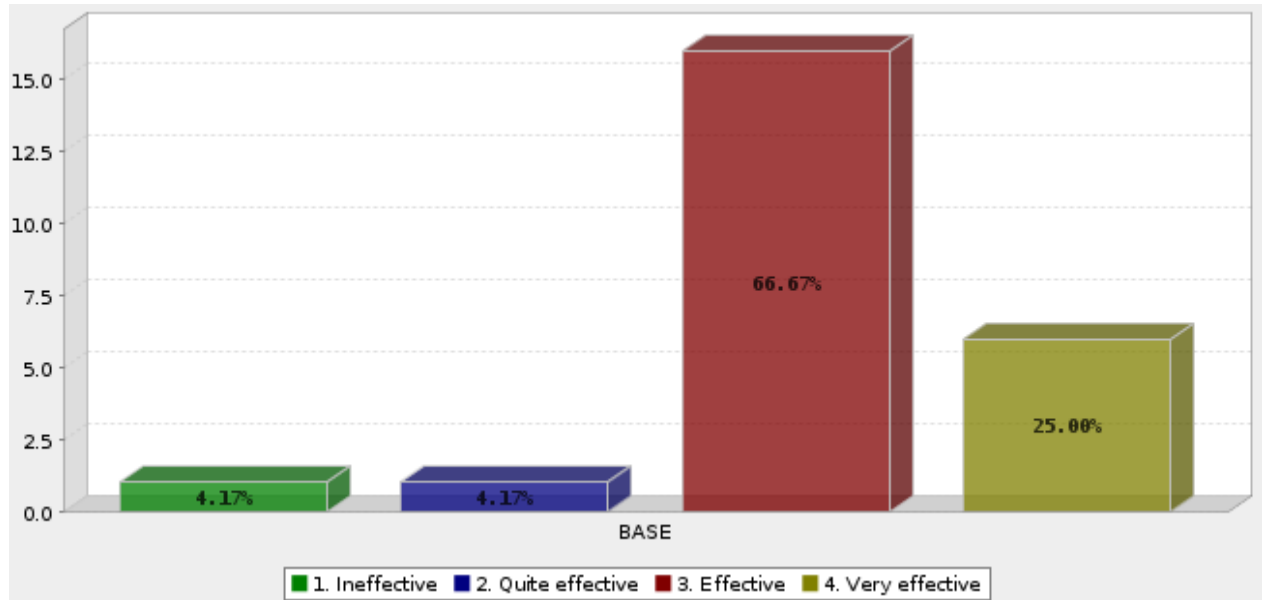
	Answer	Count	Percent	
1	In need of training	4	16.67%	
2	Quite knowledgeable	3	12.50%	
3	Knowledgeable	10	41.67%	
4	An expert	7	29.17%	
	Total	24	100%	
Mean: 2.833		Confidence Interval @ 95%: [2.413 - 3.253]		Standard Deviation: 1.049 Standard Error: 0.214

A larger proportion also felt that GE was more effective, with a common complaint about the ESP course being the preponderance of vocabulary which required “memorizings [*sic*]”, with one student commenting on it as being “very boring because the words are difficult”. This might also explain why another student stated that “ESP have [*sic*] just 2 or 3 skills and GE have [*sic*] 6 skills”. The lexis garnered numerous other statements, including the belief that the courses should be lengthened to allow more time for either learning the extensive, unfamiliar vocabulary, or reducing the quantity. On the other hand, other comments focused on the benefits of the lexical input, such as “I gain a new vocabulary [*sic*]... related to my field”.

Another issue that arose was the implementation of overly long readings, which were not always of relevance. One said “I don’t like that you have to read the passages are very long [*sic*]...” but then went on to say that the same procedure had “helped in reading”, with regard to his/her ability.

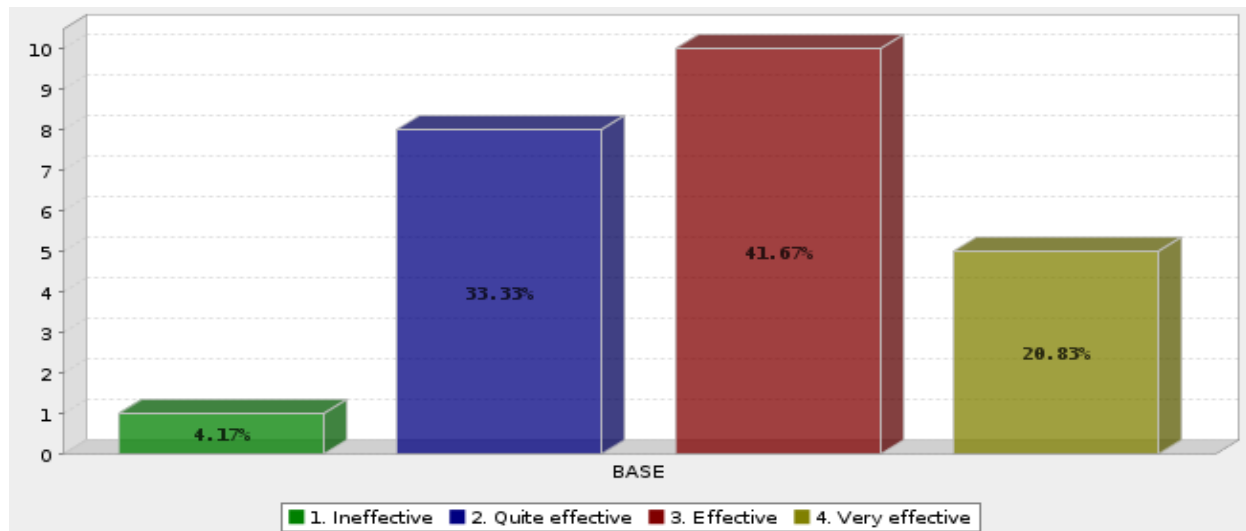
The complete data for the effectiveness of both General English and ESP is provided in Tables 4 and 5.

Table 4: The Effectiveness of General English



	Answer	Count	Percent	
1	Ineffective	1	4.17%	
2	Quite effective	1	4.17%	
3	Effective	16	66.67%	
4	Very effective	6	25.00%	
	Total	24	100%	
Mean: 3.125		Confidence Interval @ 95%: [2.853 - 3.397]		Standard Deviation: 0.680 Standard Error: 0.139

Table 5: The Effectiveness of ESP

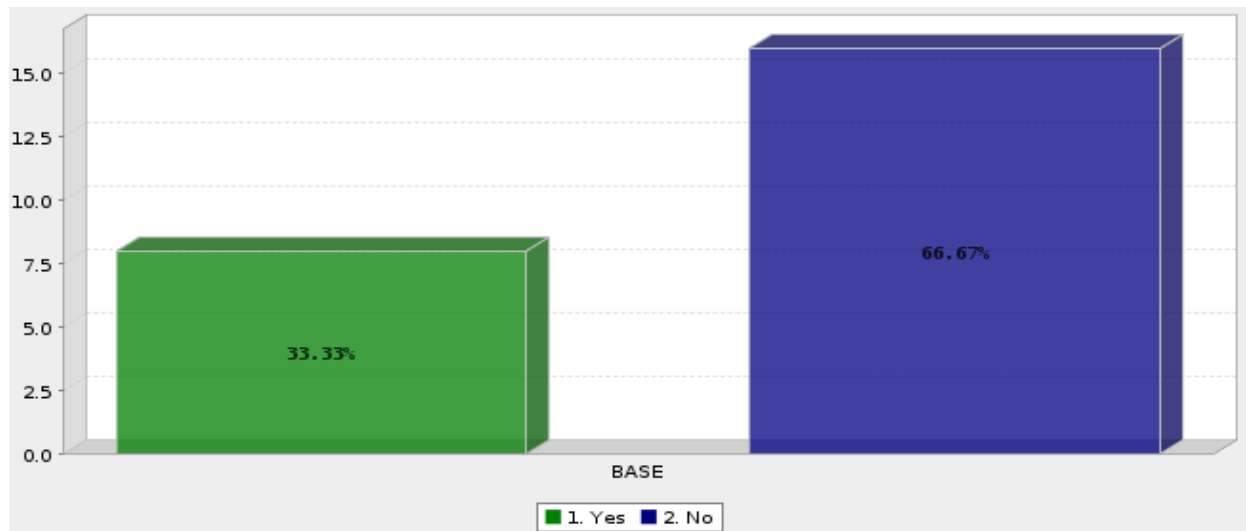


	Answer	Count	Percent	
1	Ineffective	1	4.17%	
2	Quite effective	8	33.33%	
3	Effective	10	41.67%	
4	Very effective	5	20.83%	
	Total	24	100%	
Mean: 2.792		Confidence Interval @ 95%: [2.458 - 3.125]		Standard Deviation : 0.833
				Standard Error: 0.170

Furthermore, large disparities in the statistical analysis existed with reference to the balance of input, with two thirds of the respondents of the belief that there wasn't enough ESP, with more being desired at the expense of GE, especially as some saw its content as being inappropriate. In the words of one respondent, "General English has more of a business theme to it. It is rather annoying", while another said, "... we focus on something we don't need it [*sic*]".

It should be noted though, that some requested this to be at the expense of EAP, as opposed to General English, with one student of the belief that "EAP is just repetition [*sic*] is irritating on E101 course [*sic*]". Unsurprisingly, given the balance of input, more students focused on the latter as opposed to the former, with regard to the time spent and the effort made, as illustrated by Table 6.

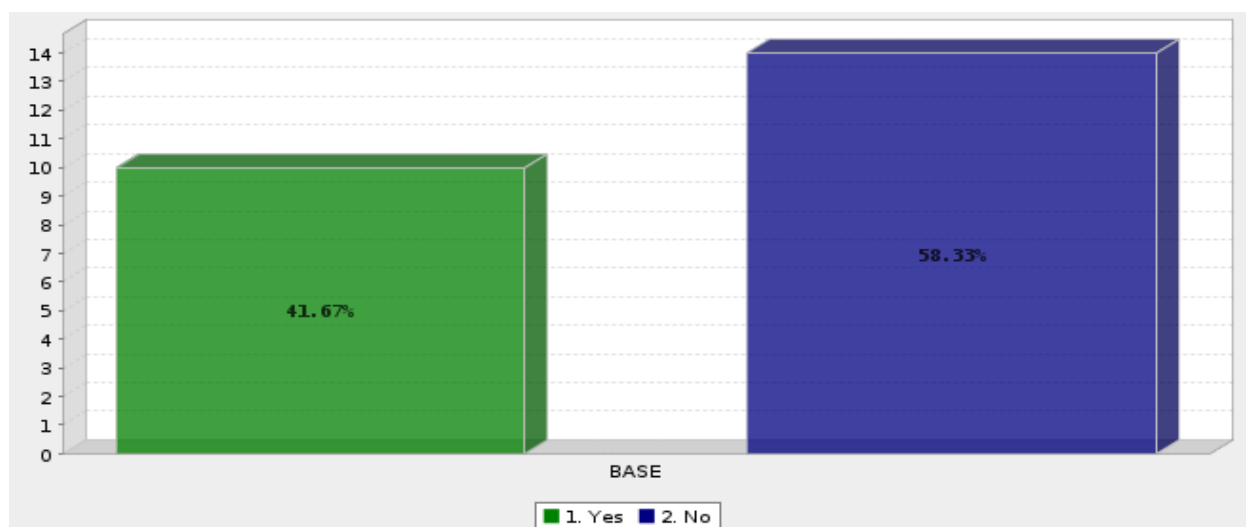
Table 6: Whether the Same Amount of Study Time is Spent on ESP and GE



	Answer	Count	Percent		
1.	Yes	8	33.33%		
2.	No	16	66.67%		
	Total	24	100%		
Mean:	Confidence Interval @ 95%:		Standard Deviation: 0.482		Standard Error: 0.098
1.667	[1.474 - 1.859]				

Given all the variables provided in the feedback, it is unsurprising that the students implement dissimilar techniques when studying the two strands of the input, as illustrated in Table 7.

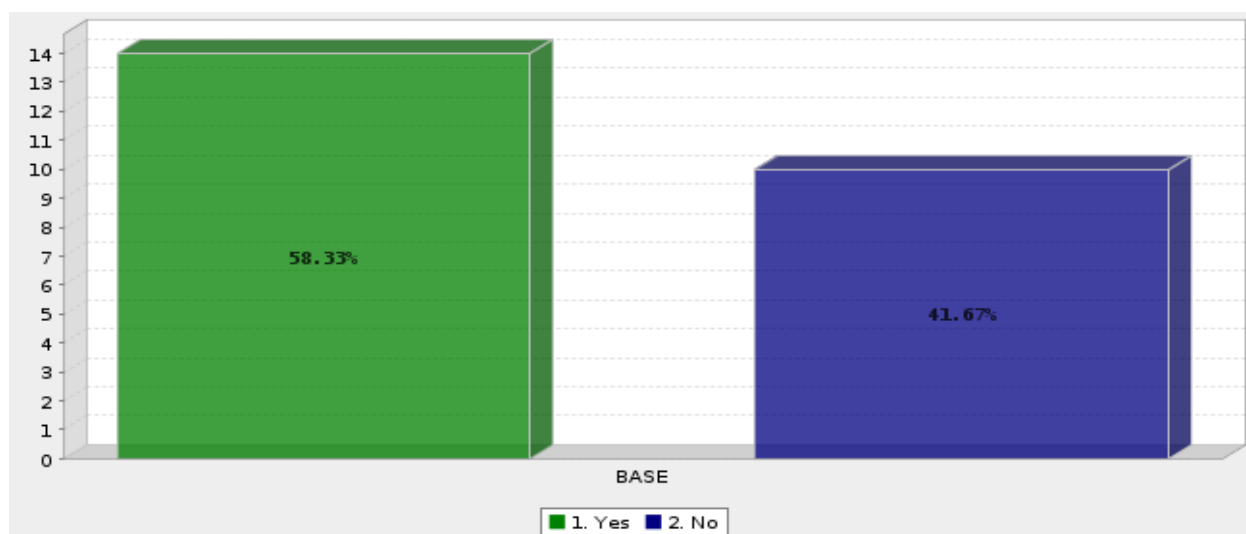
Table 7: Whether ESP and GE are studied in the same way



	Answer	Count	Percent	
1.	Yes	10	41.67%	
2.	No	14	58.33%	
	Total	24	100%	
Mean: 1.583		Confidence Interval @ 95%: [1.382 - 1.785]		Standard Deviation: 0.504 Standard Error: 0.103

Regarding the outcomes of the course, one student, mentioned the need for the implementation of “active learning” due to it being “more interest [*sic*] and easy”. However, another, contradicted this, with the statement that “The way of the teaching is very good” and that ESP, at least, couldn’t be improved, as “It’s perfect just the way it is”. However, it should be noted, that in contrast to the general trend, some claimed to benefit equally from both GE and ESP. Table 8 shows the perceived benefits of the two courses.

Table 8: Whether Students Benefit Equally from GE and ESP



	Answer	Count	Percent	
1.	Yes	14	58.33%	
2.	No	10	41.67%	
	Total	24	100%	
Mean: 1.417		Confidence Interval @ 95%: [1.215 - 1.618]		Standard Deviation: 0.504 Standard Error: 0.103

Variables were evident in both procedure and weighting of assessment, as, for example, speaking assessment is not conducted in GE, and the submitted portfolio is responsible for 5% of the grade in GE, while accounting for 15% in ESP. Writing activities for the portfolio are undertaken on a weekly basis, with the process approach undertaken, and it is expected that by the end of the course,

the students can go beyond writing coherent and cohesive paragraphs, to writing coherent and cohesive essays, generally free of lexical, syntactic and organizational errors.

Also, 3 tests form 30% of the overall GE mark, while 2 tests constitute 20% of the ESP equivalent. In General English testing, there are only 50 questions to answer, as opposed to 60 in ESP. While the first section of both are comprised of answering questions based on a reading, the 'General English' paper, as the name suggests, is based on a variety of non-specialized topics. For example, *Public Health and Nursing's Advanced Test 1* in 2016 was based on an article whose content was the topic of appearance affecting success.

Listening, which requires the answering of 10 questions with the provision of 4 options for each, is another variable as it only features in the General English test, as is the inclusion of a written task in the same paper. This involves the writing of a paragraph for the lower level students at the Beginner level, which evolves to the essay level for those in Advanced. At each level there is the provision of choice, as advocated by Tomlinson (1998) with the students provided with three prompts. At the paragraph level, these are *Opinion*, *Description* and *Process* based, with the aforementioned *Science and Engineering* paper's options being on making a good impression, a problem based on the inappropriate use of technology and the way to resolve this problem, and the preparation required for a job interview. At the essay level, the options are *Analysis*, *Description* and *Narrative*, with the topics of role models, attractive stores and the importance of family activities for teenagers in the *Public Health and Nursing* paper. While no word limits are provided for the written output, each rubric states the recommended format, and the content of each paragraph for the essay length tasks, as well as suggesting time allocation.

Differences in the teachers' feedback included reference to the provision of redundant material, such as the input on quilting. Also commented on was the need for more supplementary material and/or freedom to not just use the book, with two mentioning the need for input on sentence structuring, for example. This is a belief which tallies with Bouzidi's claim of there being a mismatch between a book's content and learners' needs, resulting in the use of supplementary material being an integral part of a course (2009).

Another concern with ESP was the limited focus on practice, and the need to integrate material required to achieve the stated aims of the course, in lieu of the provision of a plethora of lexical

input with limited contextualization. On top of this was the limited opportunity to constructively use the said vocabulary.

The 27 transcripts were also contradictory in nature. In reply to what is done in the GE classroom, there were a total of 16 answers, with the only generic replies focusing on vocabulary, grammar, reading and listening. With reference to individual replies, one comment was on the incorporation of games to make classes “exciting and fun”.

Different comments on the problems associated with the course were also provided, as 13 were made known by the 20 students who replied to this particular question. The only ones mentioned by more than a single student were reading, with 4 claiming it to be problematic. The other comments were the level of difficulty, “I am a beginner and Book 3 is very difficult”, and vocabulary, due to it being “very hard”, with one student suggesting the reduction of the input to 15 words per unit in order to “memorize the vocabulary easily [*sic*]”. However, in contrast, another participant stated the benefit of “having vocabulary, lots of vocabulary”. Short deadlines, grammar, the material not being challenging, and the time invested in the course were the other comments generated, with a further 2 replying that there weren’t any issues.

However, with respect to the ESP input, there were only half the amount of replies in comparison, and these were, with the quantity provided in brackets, vocabulary (10), discussions (5), speaking (3), reading (3), grammar (2), and writing (2). For activities and tasks, 15 were mentioned in GE, though some were generic, such as vocabulary, as mentioned by 6 respondents. However, in ESP, the methodology was the most common response, with groupwork mentioned by 8, which made the course “so interactive”. Another response commented on the benefit of catering for different learner styles, as advocated by Morgan (2016), as this particular student enjoyed the input of pictures and videos.

Variables were also observed among the 6 GE and 6 ESP samples of students’ essays, with the students in question being from the following tracks; GMA (Engineering Group 1), GMH (Engineering Group 8) and SML (Science Group 12). These were chosen randomly, with 2 students representing each level. Unsurprisingly, the lower level students’ work was of the poorest quality for both GE and ESP, with the highest level students producing the best work. For the Elementary students’ GE essays, one example consisted of a solitary paragraph, while the other,

despite containing 3 paragraphs, was not developed, as it constituted a total of a mere 6 sentences in its entirety. In contrast, their ESP equivalents were better, with one being 219 words in length, and the other comprising 4 paragraphs, despite their need for elaboration. The Intermediate students' work, perversely, had better GE essays as one of the ESP student's work had coherence and cohesion issues, while the other's content was inappropriate as it recommended Riyadh as a place to visit despite the body of the essay only stating its issues with transportation. Similarly, the higher level students also wrote better GE essays as both of the ESP essays had issues with organization, incorporating errors in cohesion and coherence. However, to determine if such discrepancies are the rule, more essays need to be analyzed.

Implications

There is a tendency for ESP teachers to find the teaching of ESP challenging due to the different skill-set required, compared to GE, and a lack of knowledge of the material being presented because of the specialized content. On top of this, there is a shift in focus to the material presented, as opposed to the mode of delivery.

As a result, there is a need, as expressed by a large percentage of the teaching fraternity, to undergo training in order to maximize the benefit of ESP, which should be viewed as a long term process (Alexander, 2007). It can be provided in a number of different forms. Campion (2016), for example, comments on inducting formally, followed by peer observations, though is aware that it is a time consuming procedure, while the validity of observing colleagues is supported by Motallebzadeh, Hosseinnia and Domskey, (2017), and Merc (2015), due to the process leading to the learning of new skills, and the consequent enhancement of the quality of teaching and learning. Informal means are also stated which can simply involve talking with colleagues, picking up ideas, or reading around the subject.

Furthermore, due to the subject specific knowledge, we are of the belief that it is imperative that thorough teachers' notes are provided and teachers become familiar with their content before teaching the material. This is because it allows them to focus on teaching, as opposed to mastering the lexis.

If feasible, such knowledge could also be acquired through taking a relevant MA (Campion, 2016), while another form of input is experiential. However, Post (2010) states that there should be access

to an insight into the role if the teachers are to undergo this particular procedure, such as ESP methodology being distinct.

Finally, assessment of ESP competence is important due to the need to undertake specific language tasks with this skill (Norica-Bucur & Neagu, 2015). Assessment is also undertaken to inform stakeholders of student progress, as well as informing institutions of course objectives, content and methodology, for improvements to be undertaken. Furthermore, it provides information on the effectiveness and quality of learning and teaching and provides reinforcement and involvement with regard to the learning process (Dudley-Evans & St. John, 1998). This means ESP tests should be authentic and practical (Douglas, 2000), targeting specific language abilities, and, in theory, showing how individuals can use language in a specific context to aid in the achievement of occupational mobility (Kuo, 2016). Therefore, it is recommended that professionals are used in test design to ensure they are fair, reliable, valid and practical, while assessing the ability to undertake tasks which are required in a professional capacity, making them relevant to student needs (Basturkmen & Elder, 2006). However, it is noted that overcoming the issue of authenticity/specificity, by selecting input from genuine sources, can be difficult to implement due to the lack of availability of such material.

Conclusion

Before undertaking ESP, it is recommended that weaker students in the evaluating procedure receive a solid grounding in General English, as recommended by Master (1998), and Dudley Evans and St John (1998), to avoid problems arising when ESP is introduced too early for underprepared students. This means it is logical to continue to provide ESP only in the second semester for students who do not perform well in the placement test. However, it is feasible to make this course available to the students who do well in the same procedure in their first semester, as opposed to the current practice of not providing this cohort with the option.

Also, it should be imperative that material is provided in line with student needs, which isn't always the case. Consequently, due to ESP teaching being more student-centered, as well as the students' maturity, an informal teaching style can be adopted which encourages active participation in classroom activities (Ajideh, 2009), as opposed to learning passively.

Furthermore, as ESP is generally designed for intermediate or advanced students, with courses assuming basic language knowledge (Dudley-Evans, 1997) and being content based in order to meet learners' needs (Hutchinson & Waters, 1987), it is recommended that streaming takes place to ensure students possess a basic grounding in English before being permitted to take ESP. As well as this, those with an IELTS score of at least 6 in each of the 4 components of this test should be exempt.

According to Arno-Macia and Mancho-Bares (2015) though, there seems to be a trend towards Content and Language Integrated Learning (CLIL) where ESP used to prevail. Their research concludes that the provision of language support has been neglected, with none being offered in some instances, simply an exposure to English. To confound matters, communication breakdowns are neglected and inaccuracies ignored, partly due to providers' limited language proficiency. Also, there is a danger that some academic institutions view a focus on language as detracting from the course content, resulting in a neglect of the former, with the onus on the students being to develop their language skills independently, with the classroom being solely focused on the content. However, we are of the opinion that this belief in language being subservient should be discouraged, with the two being viewed as equally valid, and inextricably linked, especially as English has achieved global dominance in academia, as previously mentioned.

As well as classroom input, the university caters for students who wish to develop their language autonomously, with the provision of a Learning Resources Centre (LRC). This contains reading materials and an on duty teacher to help with any issues the students may have, as well as a language laboratory to enable the students to work on their speaking skills.

Moreover, it should be stated that courses should not be seen as ends in themselves, but as entities that need constant analysis and, possibly, revision. For example, on a Communicative Health course found to be challenging, English for Medical Purposes (EMP) was assessed by a medical trainer and a language trainer to determine the effectiveness of the input (Wette & Hawken, 2016). The outcome was the belief that students had progressed in certain essential skills, such as asking questions and appropriately replying to the answers, making the course beneficial for the students' communicative competence, and language skills. However, it was deemed necessary to emphasize the skills of maintaining rapport, for example, in future input, due to there being more time required to master the more sophisticated language features such as this (DeKeyser, 2007). Such analysis

also needs to be undertaken at Imam Abdulrahman Bin Faisal University, with appropriate action taken to minimize the gap between student needs and the material presented.

Integrating learner training should be undertaken, too, because, in research conducted by Alharthi (2014), Arabic learners of English were found to implement only the strategies that are easy to use, such as rote learning, which involves repeating an English item with its Arabic translation. In this, they are not alone, as it has been discovered that Chinese (Li, 2004), Burmese (Sinhaneti & Kyaw, 2012) and Iranian (Samian & Tavakoli, 2012) learners, for example, also favour this procedure. Furthermore, if rote learning does not work, learners tend to resort to similar techniques, supporting O'Malley and Chamots' belief that in Asia, this learning method is preferred to communicative strategies (1990).

However, Alharthi (2014) discovered that this procedure caused more attrition in receptive word knowledge, while note taking strategies, the writing of lexical items with their synonyms and definitions, were more effective in reception and production. This is why the author recommends the inclusion of deep process techniques to minimize attrition, and enhance vocabulary retention, such as the keyword approach, where an acoustic link exists between L1 and English, as well as an image of it interacting with the L1 lexical item (Cohen & Aphek, 1980). Also, as vocabulary learning strategies aid in learners' active target language use, it is essential for them to "comprehend the values of using strategies in vocabulary learning" (Samian & Tavakoli, 2012: 629). Finally, it should be noted that different learning preferences exist in the classroom among the student body (Morgan & McDonald, 2008), so it is the duty of the teacher to cater to these, further justifying the provision of various methodologies.

Finally, the teachers themselves should be provided with ESP training, if required, due their lack of knowledge of what, by definition, are idiosyncratic courses. Hopefully, times have changed since Swales (1985) commented on the unavailability of specialized teacher training, and Hutchinson and Waters' discovery that the situation is exacerbated in Saudi Arabia as, traditionally, limited focus has been afforded to such training (1987). As previously mentioned though, this needs to be germane, so that the staff are "trained in an adequate, critical and theoretically valid way (Phillipson, 1992)", and are aware of the professional skills and language in the subject (Lumley, 1998). However, Ferguson (1997) is of the belief that specialist knowledge

cannot be provided on any such program, and, indeed, is not needed, while knowledge construction and communication are.

Learning English is an unenviable task for numerous reasons. Therefore, given the extent of the lexis, for example, it is imperative that learners are focused in their aims in order to accomplish beneficial tasks, which, in the topic specific context of ESP, maximizes learning speed and efficiency, making it imperative that courses are produced and conducted appropriately by trained teachers, for these needs to be achieved. If this is the case, then a future should prevail where ESP will result in non-native speaking countries achieving their required goals because of access to the appropriate information, the majority of which is in English, and then having the ability to use their native languages to displace English from its position of academic pre-eminence (Master, 1998).

To sum up, the implementation of ESP is justified, provided course content meets learners' needs, and training can be arranged for those allocated with the task of teaching the materials, as well as there being a certain level which students have to attain before being accepted on their ESP course. If these recommendations are undertaken, then the students should experience a more effective Preparatory Year Program at Imam Abdulrahman Bin Faisal University.

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Learning Culinary English through Food Projects - What do Students Think?

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Biodata

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Abstract

Among disciplines of English for specific purposes, culinary English has received relatively little research and pedagogical attention. This study integrated the principles of project-based learning into a culinary English class and examined students' attitudes towards these lessons in terms of motivation and perceived learning efficiency. English lessons totaling to 12 hours were designed based on the selected theme of 'Pineapples' and through project-based learning that involved teacher instruction and small group discussions. The student groups gradually completed a final project that comprised a short film about cooking demonstration for three pineapple dishes along with a brief introduction to the dishes and the dish-making procedures. Forty-four culinary arts majors participated in this study, and eight of them were selected for interviews before and after the food-project instruction. The results showed that the students were positive towards the food-project-based lessons and considered them effective in raising their motivation as they combined hands-on projects, which appealed to students' expertise and English learning. However, their

effects in improving learning efficiency were perceived as limited.

Keywords: culinary English, project-based learning, motivation, perceived learning efficiency

1. Introduction

With the growing trend of international tourism, more and more attention is directed towards the English communication abilities of hospitality staff. As the needs of developing learners' communication abilities in service encounters have been addressed, little pedagogical attention has been paid to those of prospective kitchen staff. This may be not only because the curriculum for culinary majors in general is focused on developing their professional culinary skills but also because of their low motivation for English learning, which may in turn lead to their relatively lower English performance than their hospitality peers, as indicated by Hsu's (2014) study. However, as the popularity of gastronomic tourism and open kitchen grows, the kitchen staff has increasing opportunities to interact with guests from all over the world to introduce their dishes, ingredients, cooking methods, and even the historical and cultural information related to local cuisines. Therefore, searching for a teaching method that can arouse culinary major students' motivation for English learning and promote learning efficiency is necessary. This study implemented six 2-hour lessons, totaling to twelve hours of English lessons designed on the basis of project-based learning (PBL) with students majoring in culinary and investigated their views on how PBL lessons facilitated their learning of culinary English.

2. Literature

2.1 Teaching English for Culinary Arts

To meet learners' needs to polish English in academic disciplines and career requirements, some English teaching approaches integrate learning of English and content knowledge in contrast to general English instruction that focuses on daily give-and-take. English for specific purposes (ESP) and Content and Language Integrated Learning (CLIL) are two examples. ESP features designing an English-learning curriculum that addresses learners' specific needs, which are believed to have crucial influences on teaching methods and the language content to be taught (Hutchinson & Waters, 1987). The teaching methods and activities should be closely connected with the discipline that learners are engaged in, with appropriate language content, including grammar, lexis,

discourse, and genre, being integrated (Dudley-Evans, 1998).

A similar teaching method to ESP but with different focus is Content and Language Integrated Learning (CLIL). While both address the teaching of language and content, ESP emphasizes learners' mastery of language skills for learning content knowledge, and CLIL stresses the development of knowledge in both content and language (Yang, 2016). CLIL typically involves teaching a foreign language or a lingua franca and is sometimes referred to as content-based instruction, and its pedagogical advantage lies in placing language instruction within a specific academic context, allowing learners to develop discipline-specific content (Brinton et al., 2003; Johns, 1997, 2001). CLIL involves abundant language input and practice opportunity for learners so as to extend their academic language proficiency for preparing for the future study or career (Lee & Chang, 2008; Mackenzie, 2008; Marsh & Hood, 2008). On the other hand, CLIL have been found to be motivating and positive for language learning compared to those in non-CLIL programs (Doiz, Lasagabaster & Sierra, 2014; Pérez-Cañado, 2012), leading to satisfactory learning experience when they succeed in mastering the content subjects in the foreign language (Dale & Tanner, 2012).

CLIL programs in Europe and North American have succeeded in resulting in students' high academic achievement and fluency in the target language (Archibald et al., 2008; Costa & D'Angelo, 2011). Successful implementation of CLIL was found across disciplines, including mathematics (Jappinen, 2005), architecture, biology and law (Burston & Kyprianou, 2009), and others. Empirical evidence has shown that CLIL significantly enhances language competencies, including receptive skills, vocabulary, morphology, quantity and emotive/affective outcomes (Dalton-Puffer, 2008), and positive influences on content learning (Coonan, 2007) as instructors lead them to learning obstacles caused by insufficiency in linguistic competence. Admiraal, Westhoff and de Bot (2006) found significantly higher scores for EFL reading comprehension, general oral proficiency and pronunciation after two years of CLIL, and Goris, Denessen and Verhoeven's (2013) study also revealed positive outcome of CLIL programs implemented in the Netherlands, Germany, and Italy. Similar findings were shown in Hou's (2013) study in Taiwan, which analyzed the CLIL programs integrated with courses of Management, Introduction to Service Management, and World Food Culture. Significant improvements in student language proficiency and content area knowledge were found, though the learners' attitudes towards

instruction, including the selected materials, content-based homework, combination of English instruction, and academic knowledge acquisition, differed among learners of different proficiency levels. However, Yang's (2016) study in Taiwan showed that the learners' attitudes were not so positive about the effects of CLIL on linguistic development. It was assumed that high English proficiency learners might be less likely to perceive how CLIL improved their linguistic competences. Summing up previous studies, it seems that the nature of the different subjects taught in English, the students' English proficiency, and the teaching context can affect the teaching efficacy in CLIL education.

Despite the dual foci of CLIL, recent studies have revealed that learners of the CLIL classes tend to lack target language use (Dalton-Puffer, Nikula, & Smit, 2007; Vollmer, 2008). Yang (2016) has pinpointed that the teachers tend to prioritize their role as the content teacher based on the observation of CLIL classes implemented in the Taiwan context. As a result, sometimes English might not be used as much as expected, and language skills might be overlooked. In addition, similar to ESP courses, CLIL programs in higher education settings require extensive resources, including teaching staff who possess sufficient content knowledge of the discipline, the curricula that balance the learning and the content, and instructional materials (Coleman, 2006) and thus pose challenges for successful implementation.

As international tourism has been growing in prosperity, English courses addressing hospitality needs has also received pedagogical attention. Much course content regarding hospitality services, such as taking orders, dealing with customer inquiries and complaints, has been devised and included in the curriculum of hospitality majors both at the secondary and higher education levels, but culinary English has still been rarely addressed though food-related issues, viewed as an adequate gateway to a given culture, are frequently found in many language textbooks, such as recipes (e.g. Beare, 2014), ingredients, and cooking methods (e.g., Hsu, 2013). However, the popularity of gastronomic tourism and open restaurant kitchens has resulted in a higher demand on chefs' communicative competence in English as there are increasingly frequent verbal exchanges between kitchen staff and guests. Gastronomic tourism is defined as "travel in order to search for, and enjoy, prepared food and drink" (Wolf, 2002, p. 5) and featured by the pursuit of food experiences that are not available in the home environment, attracts global tourists interested in the origin and culture of food and in face-to-face interaction with chefs for furthering

gastronomic knowledge. On the other hand, open restaurant kitchens allow the face-to-face interaction between chefs and guests to raise the satisfaction levels of dining experiences (Harvard Business Review Staff, 2014). As a result, kitchen staff's communicative competence in English should be taken into consideration as part of their professional training and integrated into curriculum.

Existing culinary-related materials mainly introduce relevant vocabulary, such as culinary actions, odors, tastes, appearance, texture, dairy products, and utensils (Blasco, 2015), but the communicative needs related to kitchen staff are seldom included. A likely consequence is that the culinary majors' English abilities are rated as lower than their hospitality peers (Hsu, 2014). Such insufficiency in teaching might make English instruction fail to cater to the updated trend of international tourism. Therefore, finding an efficient teaching approach to culinary English that can both raise culinary majors' learning motivation and address their future career needs is necessary. However, few studies relevant to culinary English courses have been conducted, and thus there is a research gap that needs to be fulfilled. This study aimed to find a motivating English-learning approach for culinary majors, and the teaching content and activities that addressed their interests and expertise provided an incentive for English learning. It was expected that these lessons would have a positive impact on the learners' attitude towards English learning and would facilitate learners' learning of language while absorbing the content knowledge.

2.2 Project-Based Learning

Project-based learning (PBL) emphasizes students' learning that takes place in the process of completing a project. It can be used in a variety of disciplines, and when applied to language learning, it can integrate the learning of language and content, which allows language instructors to tailor the instruction for a variety of settings. The central idea of PBL, a learner-centered teaching methodology, is to provide learners with abundant opportunities for authentic use of language and collaboration through collecting information, exploration, and learning (Stoller, 1997). It is both process- and product-oriented, addressing the issues of how to reach the learning goals and what to be achieved throughout the learning process. Based on real world projects, PBL involves small teams of learners in the process to cooperate, instead of competing, to produce an end project, which might be an oral presentation, a report, or a staged performance. While

accomplishing the project, learners learn a variety of skills under the supervision of an instructor (Lawrence, 1997; Palincsar, 1991), with opportunities being offered for them to address fluency and accuracy of the target language. Because of learners' active role in PBL, the instructor acts as a facilitator and as a guide for the learners' self-directed efforts (Benson, 2005) in terms of material selection, activity design, and provision of feedback instead of directing the learning process.

Projects are effective for teaching language and content simultaneously because they “establish a direct link between language learning and its application” (Legutke & Thomas, 1991, p. 214). It also allows learners to develop competence in the target language by interacting and communicating with peers, instructors, and even informants (e.g., Fried-Booth, 2002). In the process of accomplishing tasks, learners are exposed to authentic resources for learning and gain self-reliance in the self-paced learning (Liu, 2014). One way to maximize the learning benefits of the projects is to follow the procedure proposed by Stoller (1997) and Sheppard and Stoller (1995), which is briefly explained as follows. At the beginning, the instructors and learners should first agree on the theme, the final outcome, and its structure. Then, the instructor has to prepare the learners for data gathering and analyses, and the learners do them accordingly. Finally, the instructor should announce the demand of the presentation to the learners, who make the presentation following the requirements. Their self-evaluation of the projects comes at the end of the whole process to keep them attentive throughout the process and also serve as a reflection on their own learning.

PBL offers many benefits for instruction and learning, and in general, it receives positive responses from learners. For example, in the process of accomplishing the project, critical thinking (Ke, 2010; Mergendoller, Maxwell, & Bellisimo, 2006), creativity, decision-making abilities, problem-solving skills, and life-long learning are fostered (Brown, Ash, Rutherford, Nakagawa, Gordon, & Campione, 1993). The learner are actively involved in PBL because the projects are negotiated by the instructor and the learners throughout the process rather than fully pre-planned by the instructor (Díaz-Rico, 2004). Such active involvement promote learners' autonomy (McCarthy, 2010), which turns them from a passive knowledge recipient into an active explorer while expertise in a topic develops in the information-collecting process (Bereiter & Scardamalia, 1993). Communicative and social contact can be facilitated through collaborative productions (Kohn & Warth, 2011), which improve learners' language competences, and their self-confidence in their ability to learn

independently can be built (McCarthy, 2010).

Despite the benefits, PBL has its limitations, which is closely related to learners' attitudes and proficiency (Liu, 2014). Due to the tendency to separate content and language learning, learners who consider the main purpose for learning is language may even resent non-linguistic tasks and perceive them as a waste of time (Moulton & Holmes, 2000). For instance, Eyring's (1989) study found that learners of English as a second language (ESL) were not positive about project tasks, and language learners in Beckett's (1999) study prioritized grammar and vocabulary learning and thought of activities leading to the final projects as distractions. It is likely that low-proficiency learners view PBL as being too challenging and feel unmotivated or frustrated, especially when there is also no guarantee for the success of the projects. To overcome these challenges, Beckett (1999) and Wilhelm (1999) have emphasized the importance of making the goals of the project work explicit. Setting up the project framework which assists the learners to connect content and language learning can also be useful (Beckett & Slater, 2005). When such connections are built, learners can recognize the relevance among the projects, content, and language learning so as to lead to positive responses that facilitate learning outcomes.

To conclude, PBL appears to be useful for teaching English for specific purposes or as a means for Content and Language Integrated Learning, as it allows learners to gain competence in both content and language. The present study employs PBL in developing culinary majors' professional English competence and explores their attitudes towards the lessons. Pineapples were selected as the main theme of the lessons as they were the featured local agricultural product of a district of Tainan, Taiwan, where the learners' university was located.

3. Material and Methods

3.1 Teaching Materials

Based on the theme of pineapples, three types of teaching materials were selected: short articles introducing Taiwanese pineapples, pineapple-based recipes, and short culinary films of cooking demonstration on pineapple dishes. All the materials, as Table 1 shows, were adapted from online resources introducing Taiwan, recipes, and cooking demonstrations. Other supplementary materials, such as slides and practice sheet, were developed by the instructor.

Table 1 Teaching Materials Used in this Study

Articles	1. “Good Luck is Coming! – Pineapple Cultivation in Tainan” (Matheson, 2013) Source: http://www.eventaiwan.tw/en/news/detail_6308_2501
	2. “Don’t Miss Out on Taiwan’s Best-known Treat: Pineapple Cake” (Tsai, 2015) Source: http://www.theepochtimes.com/n3/epochtaste/1742628-pineapple-cake/
Recipes	1. “Pineapple Gelatin” Source: http://edu1.wordpressia.com.sfx.nkuht.edu.tw:8080/Sinorama/index.htm
	2. “Pineapple Muffin ” Source: http://allrecipes.com/recipe/69664/delicious-pineapple-muffins/
Short films	1. “Pineapple and Cucumber Salad” Source: https://www.youtube.com/watch?v=KbhXYSIs-J4
	2. “Pineapple Fried Rice” Source: https://www.youtube.com/watch?v=hL0kuCIfFJI
	3. “Taiwanese Pineapple Cakes” Source: https://www.youtube.com/watch?v=ij1Py11DtrU

3.2 Semi-Structured Interviews

The present study employed semi-structured interviews to investigate participating learners’ views regarding integrating food projects into instruction of culinary English. Pre-instruction and post-instruction interviews were conducted before and after the food-project-based lessons. Pre-instruction interviews explored learners’ background information related to English learning, including learning experiences, motivation, and their views on the importance of English learning. Post-instruction interviews addressed the participating learners’ perspectives on integrating food projects into instruction of culinary English in terms of the perceived effects of raising professional knowledge and learning motivation and also how these lessons solved their previous learning problems. The interviews were audio-taped, with the interviewees’ consent, and transcribed for follow-up analysis. The interviewees rated their competence and learning motivation on the scale of 1-10, and the ratings were processed by T-test analysis; the interviews were analyzed by content analysis for insights into learners’ attitudes towards the food-project-English lessons.

3.3 Participants

Forty-three sophomores majoring in food and beverage management and culinary arts and enrolled in an advanced culinary English course participated in this study, and they had taken General English courses and Culinary English course in previous semesters. Based on their performance in a school-required English proficiency test in the end of the previous semester, College Student English Proficiency Test (CSEPT)¹, eight interviewees, with four low-level learners and four intermediate learners, were invited for interviews before and after the English instruction integrated with food projects for their perspectives regarding the effects of these specifically designed lessons on their learning of culinary English.

3.4 Procedures

Culinary English lessons totaling to 12 hours integrated with food projects were designed and implemented. Each of the lessons lasted for two hours, launched in six successive weeks (one lesson per week) aimed to equip the learners with basic knowledge required for their final projects—to produce a short film guiding viewers to make three pineapple dishes: an appetizer, a main dish, and a dessert. Brief introductions to the dishes and English captions were also required.

The principles for designing lessons were to start with equipping students with relevant knowledge, such as Taiwanese pineapple culture, linguistic features of recipes, and vocabulary related to making pineapple products, to prepare them for the final project. Through reading articles and recipes combined with relevant language practice, discussions with group members and the instructor, preparations for final projects, and finally complete a short film introducing the dish-making procedures of three pineapple dishes.

4. Results and Discussions

4.1 Pre-Instruction Interviews

Pre-instruction interviews explored the students' attitudes towards English learning. At the beginning of the interview, the interviewees were asked to rate their English abilities and learning

¹ College Student English Proficiency Test (CSEPT) is developed and issued by Language Training and Testing Center in Taiwan. It is used to measure English proficiency of learners of beginning and intermediate levels; i.e., A2 and B1 levels according to Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR).

motivations on the scale of 1-10, and the average was 4.8 and 5.4, respectively. Both indicated that the students regarded themselves as low proficient in English and demotivated. There did not appear to be significant differences between the low-level learners and intermediate learners' rating of English competence ($t = 1.18$; $p > .05$), indicating that they were similar in the lack of self-confidence in English, and L2 even rated 2 on the scale for her English ability.² In terms of learning motivation, I1 was the only interviewee who was positive about English learning, as there was much English in his favorite online games, giving him pleasure and motivation to learn English. The other interviewees were not interested in learning English for various reasons, including feeling forced and uninterested (I2, L3), dislike for the instructors' intentional interaction for conversational practice and boring teaching (I3, I4), feeling English was too challenging (L2), and even a negative connection between making mistakes and being punished during the learning process (L4).³

Despite their dislike for English, the interviewees agreed on the importance of English learning because it was a prerequisite for good jobs (I4) and for getting a passing grade for the required English class (L4). In addition, based on the part-time job experience, L2 stressed the importance of English for work:

“at least you should know what foreign guests want to express... to understand whether they prefer sour or sweet wines, and these require basic English abilities....now I regret not having learned English well, at least I should have learned how to take orders. In the past, I felt English was too difficult, but now I feel I should give it a try and at least learn some basic English.” (L2)⁴

Among all English abilities, the interviewed students perceived listening and speaking abilities as more important than any other skills since English should be primarily used for communication. In their opinion, communication occurred when speakers and listeners could mutually understand each other (I1 、 I2 、 L1 、 L3 、 L4), and that speakers should try to make themselves understood

² The interviewees were coded as L1-L4 for low-level learners and I1-I4 for intermediate learners, with “I” indicating intermediate learners and “L” indicating low-level learners.

³ The coded number in the parenthesis referred to the participants who expressed the opinion.

⁴ The interviews were conducted in Chinese. In this paper English translation of the interviews was used.

(I3). Grammar in oral communication was not considered as important as fluency since “foreign guests would try to guess what you want to express when they know your English is not very good” (L2). All of the interviewed students agreed on the necessity of English abilities for working in the restaurant industry, especially in international-branded restaurants, as there are plenty of opportunities to interact with foreign guests for instance in taking orders, introducing menus, and having conversations (I1, I2, I3, I4, L1, L2, L3, L4). Some international restaurants would invite foreign visiting chefs or managers (I1, I4, L2) or require the staff to read English recipes and understand English terms of ingredients (I3, L3). Such abilities were particularly essential to those who would like to go abroad to experience different cultures, pursue further study, and polish professional skills (I1, L1, L4).

Summing up the pre-instruction interviews, the students seemed ambivalent about English learning in terms of motivation and its importance—though they disliked learning it, they agreed on its importance for their future career in the restaurant industry. This finding might be related to traditional education in Taiwan, as students choosing culinary skill arts as their major tend to be concerned about polishing hands-on skills and ignore other courses that were not directly linked to these skills. Expectations and pressure from parents and instructors worsen the situation, and as a result, culinary majors’ English proficiency level and learning motivation become lower. However, as they realized the importance of English, they were willing to learn if the course content was tied to what was required for the career. Thus, designing lessons that could both raise their learning motivation and improve learning efficiency in culinary English was necessary.

4.2 Instruction and Learner Projects

The lessons of the present study followed the ten teaching steps proposed by Stoller (1997) and Sheppard and Stoller (1995), and the teaching activities corresponding to each step are presented in Table 2.

Table 2 Teaching Activities Corresponding to Each Step of PBL Proposed by Stoller (1997) and Sheppard and Stoller (1995)

<u>Phase I: Agreement between learners and instructor</u>	
Step 1: Learners and	The instructor held a discussion with students on the theme for the project following the direction of “local agricultural product of Tainan” and “an

instructor agreed on a theme for the project.	ingredient appropriate for appetizers, main courses, and desserts.” The consensus was reached that pineapples were to be used as the theme for the project.
Step 2: Learners and instructor determined the final outcome of the project.	Students formed groups of three to five, and the instructor proposed using a short film on cooking demonstration of pineapple dishes along with asides and English captions. Groups discussed, asked questions, and offered suggestions, and finally the groups and the instructor reached a consensus.
Step 3: Learners and instructor structured the project.	The final project was a short film of cooking demonstration, and the whole class agreed that the film should include written and oral introductions to the dish-making procedure and information of the dishes.

Phase 2: Information gathering & analyses

Step 4: The instructor prepared learners for the demands of information gathering.	As the lessons aimed at constructing pineapple-related knowledge and corresponding English abilities to prepare for the final project, the instructor guided the students to look for the data sources and to be familiar with selection criteria while introducing the course content.
Step 5: Learners gathered information.	There were assignments to let students collect information for the final project step by step. For instance, in the lesson of the 3 rd week, after the instructor introduced an article on pineapples and a recipe for pineapple muffins, the students got into groups to discuss ten cooking verbs that they would use for making the three pineapple dishes.
Step 6: The instructor prepared learners to compile and analyze data.	<p>(1) The instructor introduced the content that could be included in the dish introduction and led the students to practice collecting, selecting, and presenting information.</p> <p>(2) There were about twenty to thirty minutes for group discussions or instructor-student interaction. The instructor also briefly reviewed each group’s assignment and offered suggestions.</p>
Step 7: Learners compiled and analyzed information.	Each group presented the information they collected for the final project with ppt slides to share with the whole class and to get peer feedback. In order to present, they needed to collect and analyze the information first.

Phase 3: Presentation on the final product

Step 8: The instructor prepared learners for the demands of the final activity.	Through watching sample films, students realized the information generally included in cooking demonstrations.
Step 9: Learners presented on the final product.	Each group uploaded the film to Youtube and shared with the whole class in the last class session.
Step 10: Learners evaluated the project.	Each group selected the best films and offered feedback. The instructor gave feedback to each group's film while students of each group self-reflected on their own film.

As students' reflections on the learning processes were crucial to PBL, the present study included two parts of reflections: students' selection of best films and group reflections on their own final projects. Each group selected two best films, and the results showed that Group 5 was voted as the best and Groups 6 and 7 as the second high whereas group 1 ranked third. Peer feedback received by the best films was mainly about the content, the speaker's English, how the dishes looked, and captions, which are summarized in Table 3.

Table 3 Peer Feedback Received by the Best Films

Groups	Peer Feedback Received
Group 5	the dishes looked delicious; the film was well and clearly shot; the speaker's English was good; the film was smooth ⁵
Group 6	the film was clearly shot; the music was light; the speaker's English was smooth; the content was detailed and complete
Group 7	the introduction was detailed; the dish-making procedures were smooth and well-executed; the speaker's English was good
Group 1	the caption was clearly and well written; the reading was good; the photos were well taken

Table 4 shows each group's self-reflection on the final projects, which was divided into three parts:

⁵ Because of learners' limited English proficiency, learners' reflections, both peer- and self-reflections, were originally written in Chinese and translated into English here by the researcher.

strengths, weaknesses, and what is learned in the process of completing the film. The strengths listed were mainly related to the technical qualities of the film, such as the edition, operation, pictures, and smoothness, and weaknesses were concerned with English (e.g., grammar and fluency), film-editing skills, and dish-making procedures. In terms of skills learned in the process of completing the film, seven out of ten groups (excluding one group that did not offer reflections) mentioned that they learned knowledge related to culinary English, including cooking methods, ingredients, introductory remarks to the dishes, new vocabulary, and translation abilities between Chinese and English.

Table 4 Each Group's Self-Reflections on the Final Projects

groups	strengths	weaknesses	what is learned
1	many English terms of ingredients	grammar related to sentences	We learned many English terms of ingredients.
2	assistance from the instructor	problems with (voice) recording	We understood the origin of the dishes and procedures of making them. The process helped improve Annie's English, Betty's film shooting, Cathy's film editing skills, and Diane and Evan's cooking. We got much fun in the whole process. ⁶
3	speaker's good English	shooting and editing of the film	It was exhausting to produce films.
4	simple dish-making procedures, good film editing	over-simplified dish-making procedures and ill-equipped cooking facilities	Cooperation was important, and we learned cooking-related English, such as cooking methods and English terms for ingredients, and how to edit films. We learned some skills which were not used in other reports.
5	clear asides and captions, simple	unclear captions for each step with	We learned a lot, and it was fun. We learned many different

⁶ The above-mentioned names are pseudo-names for identity protection.

	dish-making procedures that were not too long or complicated	introductions to dish names	vocabulary and sentence writing skills and improved our film- editing skills.
6	good film-editing	some details that were not well handled, loud background music	We learned to compose recipes, translate Chinese terms into English, introduce dishes in English, and cooperate with one another.
7	professional cooking skills	the background music	We learned cooperation, discussion, and negotiation.
8	clear pictures and asides	the asides that can be more smooth	We learned how to edit films, translate the dish-making procedures, and read English clearly.
9	a smooth film	amount of gelatin added to the pineapple and vegetable jelly	We learned cooperation was important.
10	clear pictures and good English	N/A	N/A
11	everyone's effort	N/A	We learned a lot of new vocabulary and how to edit films. We also realized that pineapples could be used in many different dishes.

4.3 Post-instruction interviews

After the food-project-based lessons, the eight interviewees who participated in pre-instruction interviews were interviewed again for views regarding the effects of these lessons on their learning efficiency and motivation. The average ratings of the interviewees' self-rated English abilities and learning motivation were 5.9 and 7.1, respectively, which were both higher than the ratings gained in the pre-instruction interviews. Table 5 shows the comparison between interviewees' ratings about learning culinary English in pre-instruction and post-instruction interviews.

There were no significant differences in ratings for competence or motivation between interviewees of two proficiency levels after the instruction, but as Table 6 indicates, they showed significant differences in their ratings before and after instruction both in competence and learning motivation, showing the interviewees' positive attitudes towards the food-project-based lessons.

Table 5 Interviewees' Ratings Regarding Learning Culinary English before and after the Instruction

rating rubric interviewee	Pre-instruction interview		Post-instruction interview	
	Competence for culinary English	Motivation for learning culinary English	Competence for culinary English	Motivation for learning culinary English
I1	7	8	5	8
I2	4	4	6	6
I3	5	3	5	7
I4	4	6	7	8
L1	6	5	6	8
L2	2	5	7	8
L3	5	5	5	5
L4	5	7	6	7
t-test	t(45)= 1.18; p =.24	t(45)=-.57; p=.000***	t(45)=-.92; p=.36	t(45)=-.45; p=.66

Table 6 T-Test Results of Interviewees' Ratings of Competence and Learning Motivation before and after the Instruction

	Competence for culinary English	Motivation for learning culinary English
Low	t(22)= -3.67; p= .01**	t(22)=-7.11; p =.000***
Intermediate	t(22)= .24; p =.022*	t(22)=-4.49; p =.000***

Among the eight interviewees, five (I2, I4, L1, L2, L4) regarded that the food-project-based lessons promoted their knowledge of culinary English while the other three (I1, I3, L3) thought of the effects as being slight. However, all of them agreed that their speaking and reading abilities improved. Because the final project required them to introduce dish-related information and the dish-making procedures in English, they needed to confirm the pronunciation of the unknown words by consulting the dictionary or inquiring from the instructor or other more capable classmates. As L2 indicated in the interview,

“.....I needed to practice speaking in order to present, so I had to be sure how to pronounce the words, and it improved my speaking abilities. As for grammar, I did not learn much since I was not responsible for drafting and editing.”

In addition to speaking abilities, I2 mentioned that her reading abilities improved because she needed to read through the class materials or other English online resources to collect information necessary for introducing the dishes. This was also agreed upon by the other interviewees, such as I4:

“I think I knew more vocabulary and improved my speaking and reading.....because we needed to write the captions, we had to understand what each sentence meant before we put it as captions. If we couldn’t understand the words, we would look them up in the dictionary. Gradually, we knew the meanings of these words.”

Interviewee L4 even mentioned that she thought her writing abilities were better than before because she needed to write up the dish-making procedures for the film:

“I think my writing abilities improved. At least I knew how to use cooking verbs such as “stir” and “fry”. I learned through dictionaries and GOOGLE translators. Once we used the words often, we could remember them and then use them more often.”

On the other hand, seven out of the eight interviewees thought that the food-project-based lessons made them motivated to learn culinary English (I1, I2, I3, I4, B1, L2, L4). Only L3 expressed that nothing had changed about his learning motivation since the work assigned to him was film editing, which was not related to English.

The main reasons that interviewees considered food-project-based lessons effective in raising learning motivation was that these lessons were related to making products (I1, I2, L2), group cooperation (I2), and exploration of information (I1, L4). For instance, I2 perceived sitting in the classroom and listening to the lecture as boring while hands-on activities that involved group work raised her interests in learning and made her concentrate. Just as indicated by L2, English learning combined with hands-on activities that she was interested in made her feel like learning English.

“It’s not easy to focus on the lessons when I sit in the classroom because there are many

things to distract my attention. Instead, hands-on activities and group work both required concentration.”

Food-project-based lessons also made the teaching content more focused so that students were aware of the objectives for learning. Traditional English classes, which aimed at developing students’ abilities to have conversations or introduce ingredients, seldom provide students with opportunities to apply what they have learned and therefore may let students feel confused about the purposes for learning. As I3 indicated,

“(Food-project-based) lessons were a bit more interesting than traditional English classes which only required us to read the textbooks. Sometimes we did not even know what the main points were. It seemed that (in the past) we studied English by following the textbook only and that we did not learn anything special.”

Students’ active exploration of information also allowed them to get involved in learning instead of being a passive recipient of the instruction. As L4 mentioned, although exploring information was exhausting, being able to use the information that she got made it easier for her to remember what was learned. The efficiency in turn strengthened her learning motivation.

Finally, six out of the eight interviewees mentioned the food-project-based lessons helped solve their learning difficulties in terms of vocabulary (I1, I4) and pronunciation (I2). According to the interviewees, these lessons were built upon a particular theme, i.e., pineapples, and some relevant words may repeatedly appear in the handouts or online resources. Therefore, they would have a deeper impression, and memorizing these words became relatively easy. As I4 indicated,

“...there used to be many new words in the textbook that made me unable to understand the text, and sometimes it was even difficult to memorize them. The lessons we had this time allowed us to read some words again and again, and they might appear in online information that I was reading. So the learning difficulty with new vocabulary seemed to be reduced.”

The students’ problems with learning pronunciation were also solved because the final project needed them to introduce the dish-related information and dish-making procedures orally. The repeated practice of pronunciation improved their fluency in speaking. Most importantly, the

students thought that food-project-based lessons solved the problems that traditional English courses were too boring for them due to the instruction, which was limited to the textbook or lacking consistency (I3/L1, L2, L4). As I3 mentioned,

“In the past the instructors were limited to the content of the textbook, but some textbooks were really boring.....Now what we learned was close to our life, something like introducing ingredients. That is useful for students of our department, and at least it’s useful for me. ”

Summing up the findings, the eight interviewees held positive attitudes towards learning culinary English through food-project-based lessons, particularly for raising their learning motivation. Some interviewed students were conservative about the effects of these lessons on learning efficiency, possibly because of the limited time for the lessons (two hours per week lasting for six weeks), which might be too short for them to feel obvious improvement in English competence. However, as the students all agreed on the importance of English learning in the hospitality industry, the crux would be to design lessons and activities that can arouse students’ interests. When English learning was combined with cooking, a hands-on activity that interested students and that was closely related to their specialties, their learning motivation was strengthened.

Students preferred food-project-based lessons to traditional English instruction also because these lessons involved cooperative learning and peer interaction, which were characteristic of PBL instruction. Group work facilitated communication and social skills (Kohn & Warth, 2011), language abilities, and learner autonomy (McCarthy, 2010). Some interviewees (e.g., I2) and parts of group reflections indicated interaction with classmates attracted their interests in the food-project-based lessons. Learning food knowledge, such as the origin of pineapples, pineapple recipes, and even stories related to the pineapple dishes, also interested them. The interviewees revealed that they needed to look for pineapple-related information for dish introductions of the final project; thus, they learned information related to pineapples from the handouts given by the instructor (I3, L1, L4) and online resources (H3, L1, L2). However, it should be noted that some groups assigned every member different work, leading to the result that students responsible for film editing or other non-linguistic tasks might not get involved in work related to English learning.

As a result, the effects of English learning were reduced. Designing assignments or activities that require every student to use English is a prerequisite for learning to take place. Instructors should be cautious about work distribution within groups not to let students deliberately avoid linguistically related tasks so as to make food-project-based lessons effective in promoting students' learning efficiency.

5. Conclusions

Based on project-based learning, this study designed culinary English lessons integrated with food projects to address students' needs for future study and career. The learners reflected that their learning efficiency slightly improved in terms of vocabulary, speaking, and reading. The likely reasons for limited effects were that as the lessons only lasted for six weeks that students did not have enough time to perceive salient improvement in English abilities. Unduly work distribution within groups that might assign given students non-linguistic work also restricted the perceived effects of these lessons on improving learning efficiency. However, the food-project-based lessons were considered motivating since English learning was integrated with group discussions and hands-on activities that students were specialized in. This finding corresponded to the principle of English for specific purposes: English lessons addressing the students' needs can make them enthusiastic about learning. It also appeals to the CLIL principles that learners absorbed content knowledge while learning English. In conclusion, this study showed that English lessons integrated with food projects were perceived as effective in raising culinary majors' learning efficiency and motivation.

This study was constrained by two research limitations. One was that the lessons lasted for six weeks, which might be long enough to carry out a project on a single theme but might not be enough for perceived improvement in learning efficiency. Practitioners interested in using project-based learning in teaching culinary English could consider increasing the length of time for launching projects to include different project themes that students are interested in. The other limitation lay in the students' proficiency level, which was in general so low that discussions and reflections had to be conducted in Chinese, inevitably reducing the effects of these food-project-based lessons on English learning. That might also explain why there were no obvious differences shown in the findings between intermediate learners and low-level learners. For further exploration, instructors could take learners' proficiency level into consideration so that subtler differences

might be revealed.

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Incorporating the Flipped Classroom Model in an ESP Class: A Quantitative Study

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Abstract

This paper reported on an ESP course applying the flipped classroom model as out-of-class activities and brain-based teaching for in-class in a Vietnamese ESP module. The study aimed at (1) exploring the beneficial impacts of this instructional combination towards learners' perceived academic performance and (2) investigating learners' perceptions towards this suggested model. Forty junior students at Banking University, Vietnam participated in the experimental study from February to May of 2017-2018 academic year. Quantitative data were collected through questionnaires and pre/post - tests comparison. Data analysis revealed that this model could not only improve learners' academic achievements but also bring about positive attitudes (enhanced confidence and engagement) towards the ESP training process.

Keywords: ESP, flipped classroom model, brain-based teaching, performance, attitudes, Vietnam.

1. Introduction

1.1. Research Statements

ESP (English for Specific Purposes) education is a complex environment in which graduates are supposed to have sufficient specialist knowledge and language skills to participate in a wide range of domestic and international activities. Since Vietnam aimed to integrate into the world economy and international cultural exchange, the practice of these ESP courses has attracted certain attentions of both educational researchers and educators in recent years. Although English training in Vietnam has undergone a shift from Grammar-Translation Method to Communicative Approaches and even Blended-Language Learning with the support of modern technology, activities which could enhance learners' autonomy outside the classroom and students' interactive collaborations during in-class sessions to reach academic achievements are still limited in many

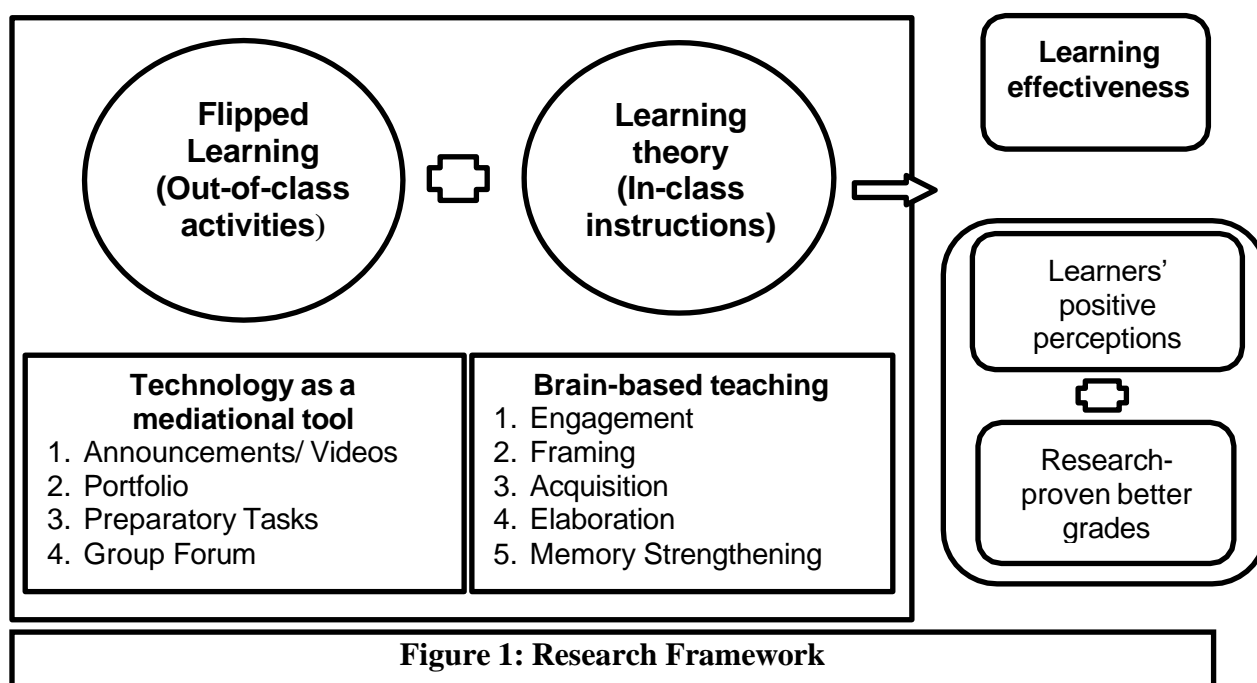
Vietnamese ESP classes (Nguyen, 2015). Therefore, with a view to making the learning environment more interactive and ESP training more effective, this study incorporated the flipped classroom model combining technology-assisted language learning for out-of-class activities and brain-based teaching for face-to-face sessions in an ESP (English for Banking and Finance) module. As a result, students might be better positioned to apply knowledge into their test papers and gain good marks as well as enhanced their positive perceptions.

Four reasons were attributed to the conduct of this study. First, a review of recent literature shows negative results could be found in some reports in terms of the learning effectiveness of the flipped classroom (Guy & Marquis, 2016; Harrington et al., 2015; Sirota, 2017). For example, the study conducted by Harrington et al. (2015), who compared learning outcomes of 82 students in a medical surgical course taught with flipped and traditional methods, noted that there were no statistical differences as measured quantitatively through exams ($p\text{-value} = 0.7$). One year later, Guy and Marquis's (2016) adopted quasi-experimental study to compare 433 business-major students' average final grades in two modes and stated that students in the flipped classroom only performed slightly better than those in a traditional lecture-based instructional method (83% and 82% respectively). Especially, Gundlach et al. (2015) asserted that students in conventional classes could perform better than those in flipped formats. Therefore, more studies should be conducted to examine the current state of knowledge on the effectiveness of this method. Second, some research studies claim that sciences and engineering disciplines may be more suitable for flipping learning than social-sciences subjects (Johnson, Bender, & Oldham, 2015). Therefore, it raises a question if flipped classrooms are appropriate for ESP education since this is also a social sciences subject and profession-oriented practice. Third, many studies discuss what benefits can be obtained from flipping classrooms, but fell short of defining an instructional framework that could guide the design of in-class activities for deep conceptual understanding and/or procedural fluency. In other words, the questions of what instructional framework should be used in planning the flipped classroom approach, how to mobilize learners to engage in the learning process, and what techniques can foster interactive and collaborative environment inside and outside of classroom are still left unanswered. Hence, further research is needed to shed light on how in-class instructional designs were actually implemented and favoured by participants (Novais, Silva, & Muniz Jr., 2017; Song & Kapur, 2017; Zainuddin & Halili, 2016). Finally, an implementation of the flipped model into ESP teaching is still in its infancy, especially in Vietnamese setting where

educators are under the pressure of building test-taking skills as well as performance-oriented activities classes (Nguyen, 2015). Therefore, a better application of technology-based elements of flipped classroom into the ESP classroom should be measured in a coherent manner. As a result, in this study, a detailed model of in-class activities revealed how classroom time was used for engaging in integrated activities, discussing subject-specific concepts, clarifying complicated information, language building, and test-taking practice. Meanwhile, technology as a mediational tool was adopted to show how out-of-class tasks were structured to enhance learners' autonomy and academic performance.

1.2. Research framework and research procedure

The conceptual framework of the study was built upon two main cores, including Technology for out-of-class activities and Brain-based teaching for face-to-face sessions. Figure 1 illustrates this conceptual framework as follows.



First, a learning forum was created on Facebook so that students could log in with their Facebook accounts, watch online videos, download the task requirements and submit assignments. The reason for choosing the Facebook lied in the fact that this social media is easy to access, technology-friendly, and does not require any costs to create, thus alleviating the fear from teachers who do not familiarise themselves with modern technology. This learning forum had two

functions: Announcements and Group Forum. The Announcements included updated news, teacher's requirements, task specifications, online lectures, and computer-assisted presentations (PowerPoint, Flash) for lesson preparation or final revision. The Group Forum worked as a platform for learners' interactions outside the classroom, information sharing, and assignment support.

Students were first introduced the topics and video lessons that would be covered in the following face-to-face lesson. The videos were taken from either online websites or teacher-made materials based on the lesson contents, course requirements, and learning outcomes. Each video lasted from 8 to 10 minutes to focus students' attention, triggering their active learning and thinking styles. The students were notified in the Announcement section about what videos were required to watch before coming to the following face-to-face session. Guided notes were also available from the online platform so that the students could download and focus on key elements in the video lessons.

During the process of video watching, students were required to take notes, write down new contents, and identify difficult concepts. After watching the videos, they were asked to complete some preparatory assignments related to the video contents to ensure that they had completed the video lectures prior to class. They might exchange difficult problems encountered during the process of preparatory assignments with fellow classmates or teachers through the "Group Forum", thereby they could actively build on the knowledge and better grasp what they had learned in the videos

The in-class activities were designed based on brain-based teaching framework of Eric Jensen (2005) to give full play to the students' enthusiasm and to achieve internalization of knowledge. It consisted of five steps: Engagement, Framing, Acquisition, Elaboration, and Memory Strengthening. First, the "Engagement" employed various warm-up activities such as songs, quizzes, games, or homework correction to create a positive learning environment and to check learners' understanding. Second, the "Framing" required learners to do exercises in the course books so that they could have a deeper understanding about how the language and new knowledge is used in their ESP contexts. These exercises include a wide range of skills necessary for ESP modules such as reading, listening, speaking, and writing related to the subject matters. Learners also examined specific lexical items and grammatical structures in their particular ESP genres. In

the “Acquisition” step, the students collaborated to deal with challenging tasks to foster integrated skills and higher-order thinking skills. These tasks included gap filling, cloze reading, error identification, scrambling, translation, and sentence elaboration. Then, within the “Elaboration” stage, learners displayed the outcomes through various forms of correction strategies such as quizzes, peer editing, presentations, debates or reports to support deeper learning. Finally, the “Memory Strengthening” in the form of mini-tests was adopted as a summary of what learners had studied during the physical class time to ensure that the right content had been internalized correctly.

To sum up, these activities aimed to provide learners with a more engaging as well as active learning environment to improve their proficiency. They also equipped learners with a more sophisticated understanding so that students could be in a stronger position to make informed choices in their future ESP practice and exam papers. However, it is worth noting that technological use was not restricted to out-of-class sessions. For instance, the classroom-based sessions used technology-assisted presentations (PowerPoint or Prezi) during the “Framing”, Kahoot or Quizizz for the “Engagement” and “Acquisition”, online corpora or Grammarly for “Elaboration”. Meanwhile, non-classroom based sessions might include a group project without the support of any technological tools (e.g. field trips). In short, technological use in this flipped classroom could be exploited in various teaching modes to meet different learning needs and help learners practice integrated skills. As a result, with technology as a mediational tool, the flipped classroom model built upon a well-defined instructional framework was expected to become a creative and participatory activity in which knowledge and practice was constructed in an active manner.

1.3. Research Questions

This study was conducted to improve the quality of ESP training in Vietnam and it aimed at answering two following questions:

1. To what extent does this flipped classroom model influence on students’ ESP final exam results compared to the traditional class?
2. What are learners’ attitudes towards this new teaching method?

Two hypotheses were adopted to answer research question 1 as follows:

Null hypothesis (H_0): There is no significant difference between the final exam scores of the experimental class subjected to flipped classroom model and that of the control class subjected to traditional instruction

Alternative hypothesis (H_1): There is a significant difference between the final exam scores of the experimental and the scores of the control class.

2. Literature Review

2.1. ESP Training in Vietnam

ESP, an area of English language learning emerging since 1960s with participants across a wide range of academic, occupational and business categories (Hutchinson & Waters, 1987), can be defined as “a learner-centered approach which motivates learners through addressing their specific needs in learning the language” (Ibrahim, 2010, cited in Nguyen, 2015, p. 227). Research into ESP teaching asserted that it aims to meet learners’ needs of professional and vocational purposes so that graduates can integrate into the international and local working environment effectively (Chostelidou, 2010; M. Johnson, 2015; B. Lee, 2017). Since Vietnam joined in the WTO and aimed to integrate into the world economy as well as international cultural exchanges, the emergence of ESP training in Vietnam has required many educators to make instructional changes to foster deeper learning, critical thinking skills, and independent learning styles to keep up with the ever-changing specific-subject knowledge as well as linguistic development (Nguyen, 2015). However, recent literature review shows that this approach might not bring about fruitful benefits due to a number of challenges posed to learners and practitioners (e.g. Nguyen, 2017; Nguyen, 2015; Tran, 2013). In a clearer sense, the differences in instructors’ experience and subject-matter knowledge are huge, the time allocated for ESP education is limited, and the expectations for this specialised training are increasing. Therefore, effective teaching strategies and innovative methods are needed to take cognizance of the exponential growth in professional knowledge, to bring better learning outcomes as well as to make better use of the learning time both inside and outside the classroom.

Another issue is that Vietnamese ESP teachers still struggle to adopt educational approaches that can support active learning styles (Pham, 2016). According to Entwistle and Ramsden, students need to be guided to “move away from learning approaches characterized by the mere

memorization toward deeper learning strategies so that they can fully understand underlying principles and concepts of the subject matter” (1983, p. 15). Although some research on ESP methodology has been done to support active learning such as project-based learning, inquiry-based teaching, learning-based review, this area is still in its infancy in Vietnam (Pham & Ta, 2016). Besides, many Vietnamese ESP instructors still adopt traditional methods (e.g. lecture-based formats) to teach grammatical structures and vocabulary with silent in-class practice. This teaching style not only hinders students’ performance but also de-motivates them. For example, Nguyen Thi To Hoa and Pham Thi Tuyet Mai (2016) found that nearly 66.02% of 362 third-year students from 11 universities in Hanoi stated that their ESP programmes did not provide sufficient knowledge and skills in this discipline and they were not confident about their English proficiency. These researchers maintained that most ESP practitioners favored monotonous in-class training and offered few real-life practice that reflected the true discipline. Hence, there is a need to change the current situation of ESP training in Vietnam.

Finally, although some scholars investigated the effectiveness of ESP training from the perspective of computer-aided instructions (Bonsignori, 2018; İlin, Kutlu, & Kutluay, 2013; Kutlu, 2013) and certain sites are also established for ESP community sharing (e.g. <http://www.esplearning.com/>, <https://github.com/learning-unlimited/ESP-Website>), these studies have some limitations such as the adaptability of online resources with the curriculum contents. In addition, physical in-class interactions are needed for collaborative learning environments as well as dissemination of content knowledge to develop profession-oriented competence in language exchange. Therefore, a better application of technology into the ESP classroom (i.e. flipping) might be beneficial since this method can integrate features of the Internet with the advantages of physical classroom activities.

2.2. Flipped Classroom

The “flipped classroom” (a.k.a. “flipped teaching”, “inverted classroom”, or “flipped learning”) is a learner-centered teaching method to improve educational efficacy that has received much recent attention in pedagogical literature. In this approach, more physical class time is devoted to real-life practice and meaningful collaborations while technology-assisted language learning such as video lessons, online collaborative discussions, or project-based digital research

are exploited for content delivery outside of the classroom (Bergmann & Sams, 2012; Sankoff & Forcese, 2014).

The theoretical underpinnings of the flipped classroom lie in the justification that class time should be spent on higher-order thinking level practice to improve learners' internalization and skills proficiency, and two factors that form this method are interactive activities inside the classrooms and technology-assisted activities outside the classroom (Honeycutt & Garrett, 2014). In this paradigm, students are expected to take initiative to prepare for the next lessons by first gaining exposure to new knowledge (usually via watching online videos), collaborate in online discussions, do some preparatory tasks or carry out research at home with the aid of technology. Then, in the face-to-face sessions, teachers guide students in completing their homework, check their understating, clarify their comprehension problems, and offer more interactive opportunities for students to do real-life or simulated practice. Class time is much dedicated to nurturing socio-constructivism and active learning by means of collaborative activities based on the pre-class work with the guidance of instructors and support from peers while less time is spent on the traditional instructor-led lecture sessions. As a result, the benefits of both online and face-to-face formats are mutually enhanced, students become more responsible to gain knowledge on their own while still receiving individualised learning assistance in the classroom (Chen et al., 2014; Lai & Hwang, 2016).

2.3. Flipped Classroom and ESP Training

The benefits of flipped teaching towards improvements of learners' academic performance and attitudes have been verified by a large number of research papers (e.g. Seery, 2015; Zuber, 2016; Ozdamli & Gulsum, 2016). However, the use of flipped learning in ESP training has received very limited attentions in terms of its influential impact on the improvement of learners' learning styles as well as attitudes. In fact, there are currently 3 accessible studies on this subject matter and this number is not adequate to decide whether and how flipping ESP classrooms can enhance students' achievements. For example, in a study using survey, observation and focused-group interviews to examine the impact of flipping method, Zhongwen Liu (2016) stated that this approach could help Chinese learners to transform knowledge effectively and become more well-prepared before physical class time, thus enabling them to solve practical problems efficiently. Likewise, Bi Wen Lee (2017) investigated how flipped classroom impacted the performance of 34 undergraduate

junior students in Taiwan and the findings indicated that learners not only expressed positive attitudes towards his flipped classroom but also increased their learning engagement, motivation and self-efficacy during the course. More importantly, Da Liu (2016) reported that 35 students in his experimental group could achieve greater success not only in the final exam results but also in the learning strategies. All of these three aforementioned studies failed to identify how in-class procedure should be structured to enhance learners' academic performance and did not reveal sufficient scientific evidence of perceived better learning outcomes. It can be said that this method has not been measured in any coherent way in ESP training field. Finally, there is no reported empirical study exploring the effectiveness of flipped learning on Vietnamese students' ESP proficiency. Consequently, these issues were investigated via this experimental research.

2.4. Rationale for the Adoption of Brain-Based Teaching in the In-Class Instructions

Three main reasons underpinned the implementation of brain-based teaching during the in-class sessions. First, this approach is a learner-centered approach based on how human brains structure and function with critical thinking and reflection activities to facilitate complex conceptual knowledge and procedural fluency (Jensen, 2005). In a clearer sense, ESP courses require learners not only to be more competent in their English proficiency but also to be able to use their domain knowledge appropriately in simulated exercises or real-life practice. For example, when students at Banking University (Vietnam) learn how to be a teller and support their customers to open a bank account, they are required to be good at English in both listening and speaking skills. In addition, they also have to provide appropriate information regarding the banking administrative forms (deposit slips/ withdrawal slips), interest rates, or banking procedures as if they were handling with real customers. Therefore, learners have to use their brains critically and reflectively to be able to master both linguistic knowledge and procedural fluency in their subject matters, which could be mediated by brain-based teaching. In short, the knowledge about how human brain functions and its effects on learning pave the way to revolutionize the teaching and learning process in a way that this approach emphasizes meaningful learning experiences and coherently systematic classroom procedure to foster deep learning and knowledge construction.

Second, some studies have revealed that aspects of brain-based instructions could facilitate students' learning performance and positive attitudes in certain ways. For example, in a study with forty third-year students in Turkey, Serap Tüfekçi and Melek Demirel (2009) asserted that the

improvement in the experimental group could be attributed to this new method as participants not only gained higher post-test results than those in the control class but their learning abilities also developed significantly in terms of retention level, affective communication, sensitivity, and active participation. Afterwards, Duman (2010) adopted a pre/post-test analysis to investigate the impact of brain-based teaching on the academic performance of 68 students at Mugla University, Turkey. His findings revealed that this approach was more effective in leveraging students' achievements than the conventional approach although academic achievement did not vary much within the same experimental group. Another study by Haghighi (2013) in Iran showed that 50 sophomore male students familiarized with brain-based learning approach could have a better achievement and retention. Recently, Saleh and Subramaniam (2018) used the Physics Achievement Test to conduct a research with 90 students from two high schools in Malaysia. Their results revealed that participants exposed to this new approach could obtain higher scores compared to those in the conventional teaching method, confirming the premise that brain-based learning was able to enhance learners' performance significantly. As a result, it could be assumed that an implementation of brain-based approach into teaching Flipped ESP classes could investigate better how different aspects this approach could mediate and influence learners' performance.

Finally, no studies have been done about the effectiveness of brain-based teaching with detailed procedure for in-class ESP activities, especially in the Vietnamese context. Currently, there is only one accessible study of Salem (2017) involving 36 ESP students in Egypt (Business majors) to enhance learners' listening skills, vocabulary retention, and motivation. Moreover, current testing practices hinder the application of brain-based teaching as educators are under the pressure of building test-taking skills and they believe that performance-oriented activities are much more necessary (Bowen, 2011). In a performance-based setting like Vietnam, the effectiveness of a teacher or an educational method is normally measured by the scores of learners in their exams. As a result, this paper investigated the effectiveness of brain-based teaching within the in-class procedure on academic achievement and attitudes of Vietnamese ESP students at tertiary level to solve this literature gap. In this study, a detailed model of in-class activities using brain-based teaching revealed how classroom time was used for engaging in integrated activities, discussing subject-specific concepts, clarifying complicated information, language building, and test-taking practice. Meanwhile, technological tools of flipped learning were exploited as the out-of-class

activities to enhance learners' academic performance. Such combination was expected to maximise the advantages of these two approaches as well as to improve the delivery model of ESP learning and teaching in Vietnam. Besides, this study could provide an in-depth insight into how to apply the flipped classroom model better with a detailed instructional framework to make the teaching-learning process more interesting and meaningful. As a result, teachers who are currently using the flipped model or who intend to use this method will benefit by understanding the flipped classroom from students' perspectives. They then can modify their teaching strategies to adapt to various learning needs or to promote student acceptance of flipped learning, thus developing more effective learning situations and enhance the current ESP teaching practices.

3. Methodology

3.1. Research Design and Research Sampling

The population of this research included 80 non-English majors at Faculty of Foreign Languages, Banking University of Ho Chi Minh City, Vietnam. They were third-year students in a four-year programme of university education. The study was conducted from February to May, 2018 with two research groups. They had studied an ESP course (ESP1) in the previous semester and this was their second module (ESP2) of the Bachelor Programme. These students were at pre-intermediate level (TOEIC 400 or equivalence). The course lasted 9 weeks and the class met once a week for five academic periods (1 period = 45 minutes). The course taught in weekly face-to-face classes focused on ESP fundamentals of Banking and Finance with integrated skill practice. The structure of the curriculum was strictly defined by the University statutory documents, which are, in turn, harmonized with the Vietnamese educational scheme. The students were assigned to their class sections (experimental and control class) by their choices of online registration as a common policy of the credit system training in this institution. In other words, information of the two classes with the name of instructors was provided publicly on the school website and the students logged into their accounts, chose which class they would like to register based on their schedules and preferences, which means that it was unfeasible to form the experimental and control groups on purpose. As a result, this random establishment of group formation might add some internal reliability to the research grouping. In addition, it is worth noting that the students had no prior learning experiences with two lecturers in the previous ESP course. Therefore, it

could be said that the popularity of teachers did not play an important role in the online registration. Table 1 below illustrated the distribution of the participants.

Table 1: Participants of the study (N=80)

Gender	Experimental Class	Control Class	Total
Female	22	24	46
Male	18	16	34
Total	40	40	80

3.2.Research Groups

Two research groups were established in this study. The flipped classroom model was implemented to one experimental group while the control group studied ESP with another teacher who used non-flipped method. The participants involved in two classes could experience equivalent educational conditions such as curriculum contents, instructional textbooks, learning location (the same classroom), quality of teachers (both instructors got M.A. in TESOL), and language of immediate environment. Hence, independent variables of the study were the pedagogical strategies including non-flipped/traditional method and the suggested flipped classroom model. This also means that the comparison between these two teaching strategies was the focus in this study.

The control class was mainly subjected to the traditional/ non-flipped format in which learners normally began their lessons with homework submission and correction. Then, they heard lectures over the subject matters/ vocabulary/ grammatical structures with examples relating those topics. Afterwards, they did exercises in the book for skill practice (such as listening, reading, writing and speaking). Group-work opportunities could be used to enhance learners' collaboration and the instructor might exploit contemporary education methods to make the lessons as interactive as possible. It means these activities could involve certain elements of active learning styles (i.e. task-based approach, project-based learning, or group presentations) as long as it did not follow the similar procedure of this suggested flipped model.

The experimental group was exposed to the flipped classroom model which was introduced as the intervention during nine weeks of the ESP2 course from February to May, 2019. They were required to do the following activities:

1. Log in the online platform, watch video lectures at home, join the Group Forum and do exercises to prepare for the following lessons.
2. Take notes and prepare portfolios because it would be marked and accounted for 20% of the course grades.
3. Work in groups and in pairs to participate in-class activities. In-class activities were structured around the brain-based teaching framework of Eric Jensen (2005) as explained in the sub-section 1.2.
4. Conduct the post-test in the final exam to see whether their ability improved or not as compared with the results of their previous course (ESP1).
5. Answer a questionnaire about their attitudes towards the flipped method in the final week.

3.3. Data Collection and Management

Two research methods were used in this study.

First, an analysis of students' exam results (pre-test and post-test) was conducted between the experimental class and traditional class. First, testing results of two classes in the previous module (ESP1 final exams) were collected and analysed to test the homogeneity of participants as a pre-test. After the treatment had been implemented for one semester, results of end-of-course ESP2 tests were gathered for analysis. All the tests were taken from the school's test bank validated by an expert committee to ensure certain issues of learning contents, testing validity and reliability. The tests were divided into five sections: Word matching with 10 definitions, 10 multiple-choice questions, Reading Comprehension to answer five questions, Translation of three sentences from English to Vietnamese, and Paragraph writing. Individual student's scores were analysed by the SPSS 22.0 data editor as the dependent variable. Learning environments (flipped class and traditional class) were the independent variables and were entered as a fixed factor. Various mathematical procedures (e.g. ANOVA, effect size, Test of Normality, and Test of Homogeneity

of Variances) were used to determine whether or not there were statistically significant differences in the test scores of the two groups. Therefore, this helped to shed light on whether this approach could bring about any measurable improvements in learner's achievements compared to the traditional approach.

Second, the study adopted a 23-item questionnaire (Appendix 1) to investigate participants' perceptions towards the flipped classroom method in this actual learning environment. On the last day of the semester, the questionnaires written in English were distributed directly to this experimental group and administered in class to get the participants' responses. First, the students were explained about the objectives of the study and encouraged to express their true opinions. They were all reminded that their participation would not influence their test scores, and their responses would be completely anonymous. Then, the researcher read each item and explained in Vietnamese so that the participants could understand them thoroughly. It took about 30 minutes for the students to complete the survey. When finished, the data were analysed quantitatively by descriptive statistics with the support of Microsoft Excel. Once all data had been transferred, student names were replaced with their previously allocated pseudonyms (to match the pre/post-test coding) to ensure anonymity.

4. Findings

4.1. Students' Academic Performance

This sub-section explores the differences of the grades between two classes. First, the analysis of the ESP1 exam results was displayed in Table 2 below.

Table 2: Analysis of ESP1 Pre-Test Results (N=80)

Descriptive analysis of Grades							
	N	Mean	Std. Deviation	95% Confidence Interval for Mean		Minimum	Maximum
				<i>Lower Bound</i>	<i>Upper Bound</i>		
Experimental Class	40	8.14	0.60	7.95	8.33	6.5	9.1

Control Class	40	8.03	0.63	7.83	8.24	6.5	9.2
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One-way ANOVA analysis					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	0.24	1	0.24	0.634	0.428
Within Groups	29.77	78	0.38		
Total	30.008	79			

This analysis show that the Sig. value is 0.428 >0.05, indicating that there is no significant difference between the experimental and control classes in terms of learners' English proficiency. The Maximum and Minimum scores of two classes are quite similar. However, it should be noted that the Mean score of the experimental class (8.1425) is slightly higher than the Mean score of the control class (8.0325).

After the treatment process lasted for nine weeks, results of the final test (ESP2) were collected as displayed in Table 3 below.

Table 3: Raw Scores of the Final Exam (N=80)

Participant	1	2	3	4	5	6	7	8	9	10	11	12	13
Experimental class	7.5	9.6	9.0	9.2	9.0	9.3	7.0	8.0	9.8	8.5	8.5	8.0	8.0
Control class	8.2	7.0	8.2	7.6	9.0	8.8	8.9	8.2	8.0	6.5	8.6	7.5	8.3

Participant	14	15	16	17	18	19	20	21	22	23	24	25	26
Experimental class	9.4	9.8	9.3	8.6	9.2	8.4	9.5	8.7	7.0	8.0	7.2	8.6	8.3

Control class	8.8	8.3	7.6	8.1	7.5	7.1	7.6	4.6	8.2	6.2	7.5	7.6	8.4
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Participant	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Experimental class	9.4	8.1	9.1	8.3	9.2	8.0	7.2	8.5	8.3	9.5	8.3	8.3	7.5	9.0
Control class	9.5	8.1	9.0	8.6	8.9	7.6	7.5	6.2	9.0	9.2	8.6	8.7	8.6	7.5

In the experimental class, 16 students got High Distinction mark (9.0 or above) with the highest score of 9.8 while two participants received the lowest score of 7.0. Meanwhile, in the control class, 5 students got High Distinction mark, 1 students obtained the highest score of 9.5, 1 student received the lowest score of 4.6, and 6 students had the score from 7 to below. Furthermore, the participants who got 8.0 marks or above (Distinction grades) in the experimental class outnumbered those in the control class, with 34 and 24 respectively.

Table 4 below provides the descriptive analysis of the post-test including Mean, Min, Max, Standard Deviation, Error and Confidence Interval. The scores of students in the experimental class ranged between 7.0 to 9.8 with a Mean of 8.55 and a Standard Deviation of 0.78. Meanwhile, the scores in the control class ranged between 4.6 and 9.5, with a Mean of 7.98 and a Standard Deviation of 0.96. It could be noted the Mean, Min, Max, and Confidence Interval of the experimental class are all higher, implying that participants in the experimental class had better learning performance than those in the control class.

Table 4: Descriptive Analysis of Post-Test (ESP2) Results (N=80)

	N	Mean	Std. Deviation	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
Experimental Class	40	8.55	0.78	8.30	8.80	7.0	9.8

Control Class	40	7.98	0.96	7.67	8.29	4.6	9.5
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The inferential statistics was also carried out to check the underlying assumptions for this research technique. Two assumption tests (the Kolmogorov-Smirnova and the Shapiro-Wilk of Variances) were conducted and Table 5 displayed the results as follows.

Table 5: Normality Test Results (N=80)

Assumption Tests		Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Grades	Experimental Class	0.118	40	0.172	0.956	40	0.121
	Control Class	0.158	40	0.013	0.908	40	0.003

The tests of normality were violated because Sig. of control class (0.013 and 0.003) was lower than 0.05, implying that the test results did not follow a normal distribution. However, this violation of normality assumption could make the One-way ANOVA test robust when the Homogeneity test was conducted as can be seen in Table 6.

Table 6: Homogeneity Test Results (N=80)

Levene Statistic	df1	df2	Sig.
0.646	1	78	0.424

Since Sig. is 0.424 and larger than 0.05, this means the test of Homogeneity of Variances was assumed and the within-group variances are equivalent.

Table 7 below illustrates the detailed One-way ANOVA analysis of the post-tests. Data revealed that there is a statistically significant difference between the results of two classes with $F = 8.49$, $\text{Sig.} = 0.005 < 0.05$.

Table 7: One-Way ANOVA Analysis of Post-Test (ESP2) Results (N=80)

	Sum of Squares	df	Mean Square	F	Sig./p-value
Between Groups	6.498	1	6.498	8.49	0.005
Within Groups	59.698	78	0.765		
Total	66.196	79			

Figure 2 below reveals that the Mean difference between two classes is 0.57. This figure is moderate, implying that more research is needed to test the effectiveness of this suggested flipped classroom model. However, it could be clearly seen from the Mean plot that the grade Mean of the experimental class is higher than the grade Mean of the control class.

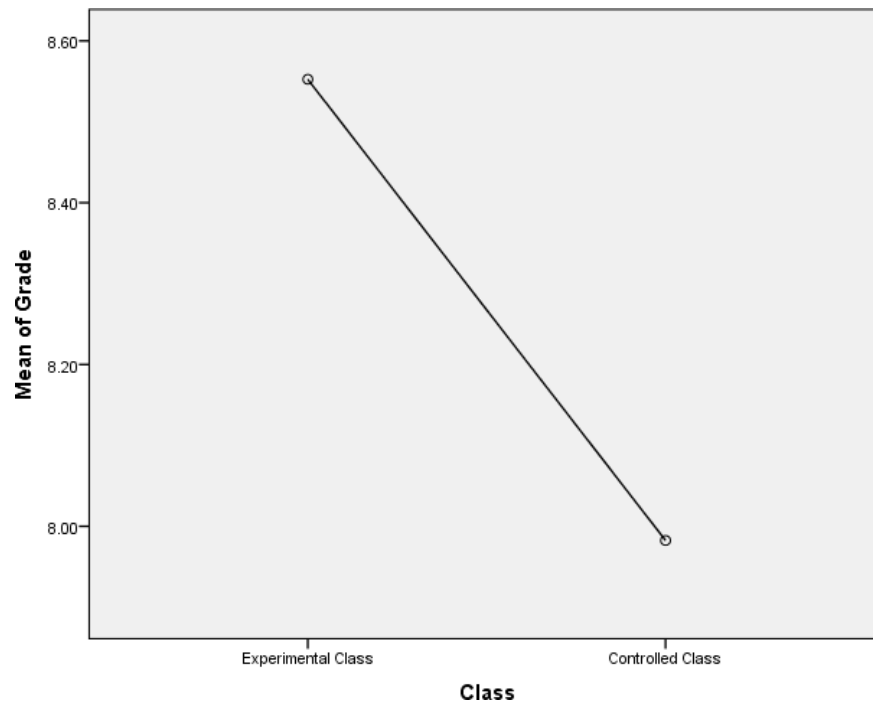


Figure 2: Mean Plot of Post-Test Results (N=80)

4.2. Students' Attitudes Towards the Suggested Flipped Classroom Model

Table 8 illustrates an overview of learners' perceptions toward the new teaching method. Overall, the Mean scores of all elements cluster above 4.0, indicating that on the whole the students appreciated the usefulness of eight steps in the model.

Table 8: Learners' Overall Perceptions (N=40)

	Usefulness	
	Mean	S.D.
Video lectures	4.23	0.58
Preparatory tasks and Portfolio	4.03	0.53
Group Forum	4.03	0.53
Engagement	4.35	0.66
Framing	4.05	0.55
Acquisition	4.03	0.48
Elaboration	4.05	0.50
Memory Strengthening	4.33	0.62

Video lectures received the high Mean score of 4.23, indicating that participants thought highly of this new teaching component. In fact, 34 answers to Question 6 about the usefulness of this element stated that learners became more prepared for the lessons, while 31 students claimed that this component enabled them to learn new vocabulary relating to specific ESP topics effectively prior to the physical class, and 35 students asserted that they could review specific grammar structures related to the lessons better.

Table 9 below depicts the benefits of Preparatory tasks and Portfolio, as well as the Group Forum. Results indicate that these activities could enhance learners' English skills effectively since all Mean scores are higher than 4.0.

Table 9: Benefits of Portfolio and Preparatory Tasks, and Group Forum (N=40)

Benefits of Preparatory tasks and Portfolio		
Understand the lessons more systematically	4.18	0.59
Check understanding and test English skills	4.2	0.46
Revise for tests and exams	4.43	0.55
Benefits of the Group Forum		
Do exercises more effectively	4.23	0.58
Discuss and practice outside the classroom	4.03	0.66
Sharpen their skills with challenging tasks	4.05	0.68

Engagement step received the highest Mean score of 4.35, confirming the value of brain-based teaching towards the learning process as it could stimulate and motivate learners for the new lessons. Moreover, Question 9 (*Do you think that the Engagement step can help you ...?*) revealed that certain beneficial aspects could be obtained from this step as can be seen in Figure 3.

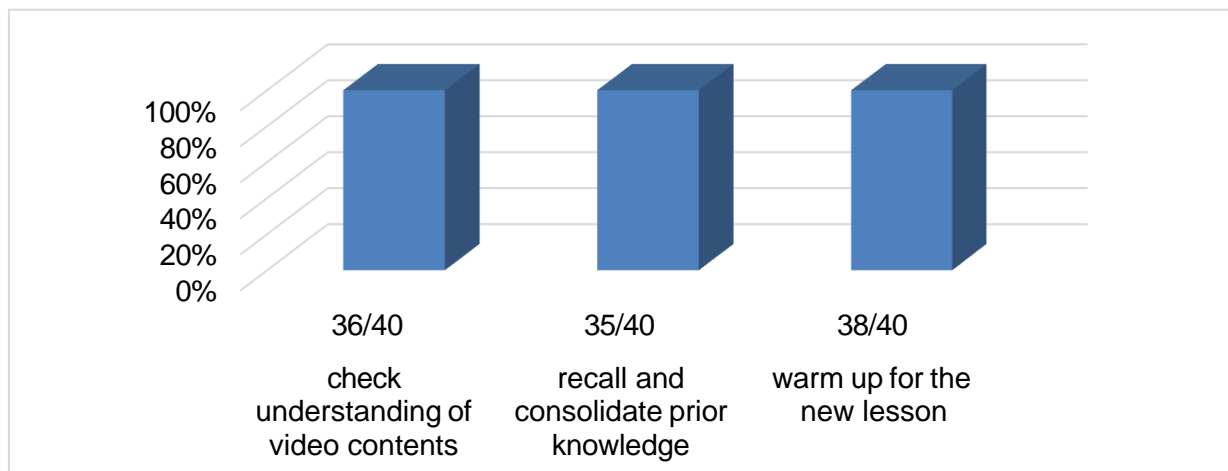


Figure 3: Benefits of Engagement (N=40)

The Framing step also received high Mean score of usefulness (4.05). Question 10 (*Do you think that the Framing can help you ... ?*) clarified this result by showing that this step helped learners in three ways: practice the lessons in context (87.5%), link vocabulary and grammar together for better understanding (92.5%), and understand the lesson content better (80.0%).

Table 10: Benefits of Framing (N=40)

	Number of students	Percentage
Practice the lessons in contexts	33/40	82.5%
Link vocabulary and grammar together for better understanding	35/40	87.5%
Understand the lesson contents better	32/40	80.0%

The Acquisition and Elaboration steps also received the high rating in terms of their usefulness ($M_{\text{Acquisition}}=4.03$; $M_{\text{Elaboration}}= 4.05$). Figure 4 and 5 illustrate the benefits of the Acquisition and Elaboration to the students' English proficiency.

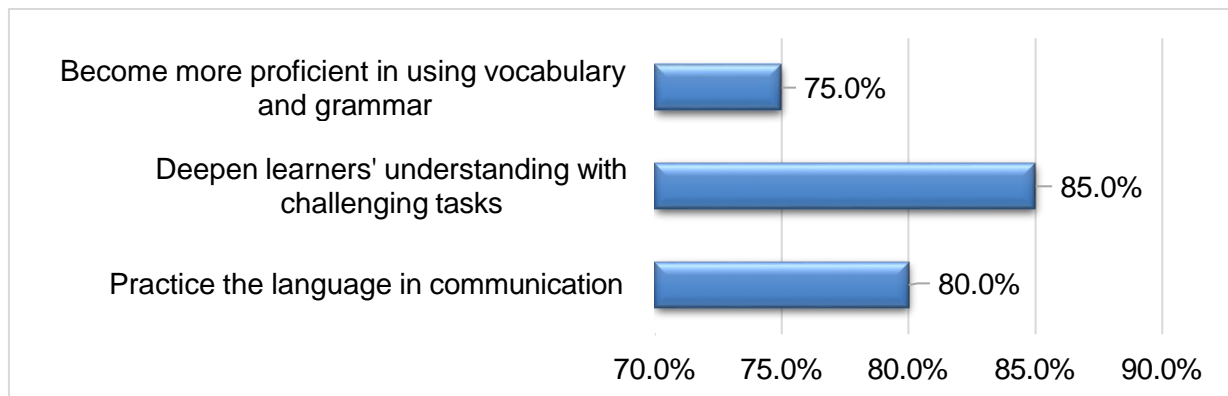


Figure 4: Benefits of Acquisition (N=40)

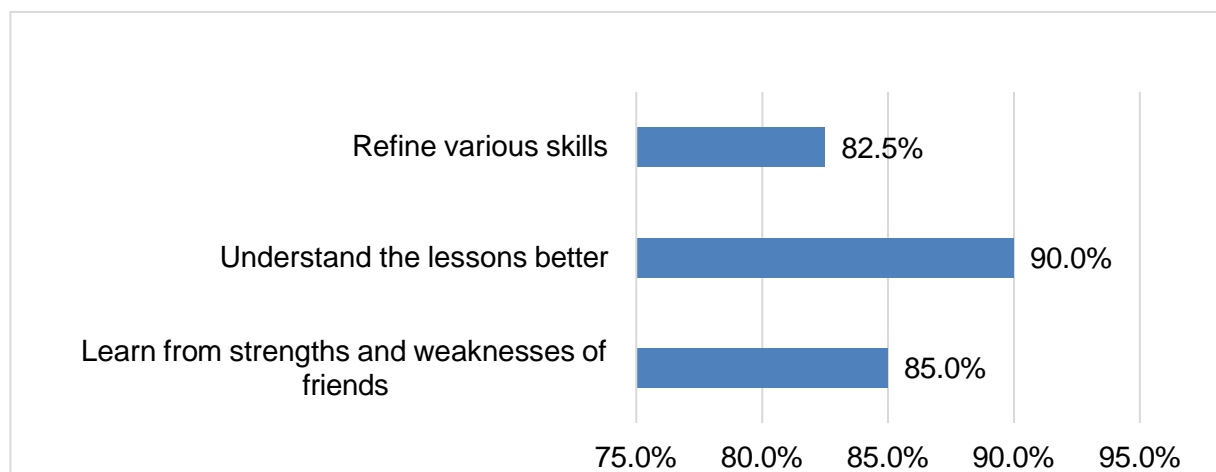


Figure 5: Benefits of Elaboration (N=40)

Finally, the Memory Strengthening was the second favoured element with the Mean score is 4.325 and the Standard Deviation is 0.616. Responses to Question 13 (*Do you think that the Memory Strengthening can help you ...?*) verified its effectiveness by showing that this component was a useful step to summarise the lessons for deeper memorizing (31/40), enabled learners to practice and get used to the time pressure for testing (34/40), and allowed learners to assess their own understanding of the lessons (35/40).

Finally, the questionnaire measured learners' satisfaction with their progress during the course. Table 11 shows that the participants were quite confident with their own performance and improvement in the course with the Mean scores above 3.5 and the Mode of 4. More specifically, not only their English ability but also positive attitudes were remarkably fostered thanks to the suggested flipped classroom model.

Table 11: Learners' Satisfaction (N=40)

	Mean	Mode	S.D.
Learners' satisfaction with an improvement in ESP vocabulary	4.15	4	0.4
Learners' satisfaction with an improvement in grammar usage	4.13	4	0.52
Learners' satisfaction with their performance in class	4.2	4	0.65

Learners' satisfaction with their improvement in soft skills	4.2	4	0.65
Learners' satisfaction with their improvement in specialized knowledge.	4.03	4	0.42
Learners' satisfaction with their understanding of the lessons	4.15	4	0.58
Learners' satisfaction with their remembering of the lessons	3.95	4	0.50
Learners' satisfaction with their participation in class	4.13	4	0.65
Learners' satisfaction with their cooperation and attentive level	4.13	4	0.56

In short, the findings clearly showed that students in the experimental class outperformed those who received the traditional instructions. In addition, students' perceptions towards this suggested model were mostly encouraging and promising.

5. Discussion and Implications

5.1. The flipped classroom model enhanced learners' academic performance with improved grades.

The pre-test/post-test analysis revealed a significant difference between the academic performances of students in the suggested ESP flipped class and those in the traditional class. Such result is quite consistent with the findings of Zhongwen Liu (2016), Bi Wen Lee (2017), and Haghighi (2013), implying that there existed a significant difference between the final exam scores of the experimental and the scores of the control class. Therefore, the null hypothesis can be rejected and the alternative hypothesis is accepted.

One explanation that could be attributed to this successful implementation is the combination of mediational flipped technology and in-class brain-based teaching. In this study, the flipped class included face-to-face component of brain-based teaching for higher-order skill practice and technological-assisted component for out-of-class activities. These two components aimed at facilitating the development of active learning and socio-constructivism, whereby learners had to watch video lectures developed specifically for the course contents. According to the respondents' judgments, these videos lectures could amplify learners' interests, enrich their internalisation, and enhance their understanding of the ESP knowledge. This was then fostered by preparatory tasks

and portfolio, together with online guidance of the instructor and supporting feedback from peers in the Group Forum. During the in-class sessions, the Engagement and Framing steps enabled learners to apply past experiences to new problems to deepen their understanding and remembering. Then, the Acquisition allowed learners to work in groups or pairs to demonstrate their understanding via specific integrated practice and simulated practice. Afterwards, the Elaboration could be seen as an assessment to learners' critical thinking skills with the gradual withdrawal of support from instructor. Finally, the Memory Strengthening was an opportunity for the learners to synthesise their understanding and knowledge, to create new insights and take into practice individually from what they had internalised in the previous steps. The teacher in this study was flexible with his roles to help learners improve their performance based on the course objectives and unit contents. Learners had more opportunities to interact, discuss issues and share information with their peers both inside and outside the classroom. They could also experience multiple learning modes such as group work, individual work, independent research, self-study, group sharing, and in-class test takers. Moreover, the in-class instructions adopting brain-based teaching helped the learners improve their English proficiency and domain knowledge in a logical structure. This means learners could get exposure to various collaborative and individual activities from lower-order thinking skills (exercises in the course books and Engagement step) to higher-order thinking skills (integrated skills practice and free practice in Acquisition, Memory Training, and Elaboration). At a practical level, students benefited from taking charge of their own learning style and at the same time they had instructors as a mentor to stimulate their thinking, guide their problem-solving skills, and provide encouragements (El-Banna, Whitlow, & McNelis, 2017; McLaughlin et al., 2016; Ozdamli & Gulsum, 2016). In short, this flipped classroom was able to achieve the balance between knowledge delivery and learners' autonomy, focusing on developing students' critical thinking skills during class time while affording individual learning outside the boundary of physical classes. Therefore, the flipped classroom model built upon a carefully-designed instructional framework (e.g. technology-assisted language learning and brain-based teaching) could enrich the learning environment and bring about a significant improvement in the academic performance of learners' ESP proficiency.

5.2. The flipped classroom model facilitated learners' positive attitudes and confidence.

The study found that the majority of respondents appreciated the opportunity to practice both inside and outside the classroom, and expressed an increased interest and confidence in ESP learning. They highly acknowledged the opportunities to exchange ideas thanks to in-class and out-of-class activities, stating that these elements could improve their attitudes and confidence significantly. Several explanations can be attributed to this result.

First, the combination of out-of-class mediational technology and in-class brain-based teaching was well-structured and interconnected with the goal of fostering learners' autonomy and active learning styles. In a general sense, active learning is a theory of designing instructional activities to help student involve in the meaningful learning process so that they can experience themselves, think about what they are doing and internalise them to solve required problems (Prince, 2004). In this model, various learning activities were used coherently to activate students' higher-order thinking skills such as group discussions, collaborative learning, debates, case studies, and problem-based learning. For instance, learners were required to acquire basic knowledge and certain linguistic elements at home (vocabulary and grammatical structures related to the thematic topics and subject matters). The instructor acknowledged that prior learning was necessary, thus enabling opportunity for students to explore the material and investigate the topics in depth, encouraging out-of-class internalization, reflection and self-study, all of which aimed to promote a deeper level of comprehension before class time. During the face-to-face sessions, the Engagement step works as a revision to check learners' understanding of new words and grammar out of the context. Afterwards, they applied the knowledge into course book practice with four skills to gain a deeper insight into how to use these linguistic elements in specialised context within the Framing step. Later, the Acquisition required them to work together to solve real-life practice. Then, they used these knowledge to evaluate their peer's papers critically. Finally, they worked on their own assignments in the Memory strengthening to test their capability and knowledge individually based on what they had learnt. It means that students had inputs and consolidations both inside and outside the classroom for their gradual development of English proficiency. All these elements are interconnected so that learners could have more time to interact and practice under the teacher's guidance. Students could take the leading role with the help of teachers to exert their engagement and autonomy effectively to discover, analyze and solve

problems, thus acquiring necessary knowledge and experience. In short, students' engagement, independence and enthusiasm was facilitated while their dependence and passive attitudes was proportionally reduced in this flipped classroom.

Second, the prior-class preparations provided practical opportunities for students to enhance their responsibility and learning habits. In a clearer sense, these activities aimed to provide necessary ESP knowledge (specialised and linguistic knowledge) and train students to work autonomously for lower-order skill activities outside the classroom. The learning outcomes included guiding learners in understanding and analysing the problems, using their existing knowledge and implementing electronic tools to solve the preparatory tasks. They were also required to support each other in teams and in the Group Forum because the exercises accounted for 20% of the total marks. As a result, such kind of individual submission would drive students towards their accountability because it pushed each of them to think about the problems on their own, follow the class rules, and do the required tasks. Those students who still preferred the teacher-centred learning style had to overcome their passive learning habits to work outside the classroom. In short, there was certain control over the prior-class preparations to ensure that learners had to do the out-of-class activities, which played an importance role in the success of the flipped classroom model.

Third, the in-class instructions adopting brain-based teaching geared towards deeper conceptual understanding, procedural fluency, and collaborative activities for building of higher-order thinking skills. As such, it could create a more active and social-constructivist atmosphere to help learners engage in their learning process. These activities aimed at consolidating and deepening the existing knowledge displayed in the video lectures so that learners could explicitly recall their prior knowledge and make connections for further ESP practice. Both group work and individual work could develop higher thinking skills required in solving the problems as well as fostering a sense of community and cooperation among the class members. Consequently, their confidence and engagement levels were greatly enhanced.

In conclusion, this study indicated the relationship between the new teaching method and learners' academic performance, improved attitudes, confidence level and engagement. Data revealed that when an implementation of this method was conducted systematically by combining technology-assisted language learning, brain-based teaching, and certain elements of educational theories (e.g.

socio-constructivism, active learning, individualised learning), there would be fruitful benefits. Learners not only confronted fewer challenges during the implementation but they could also initiate independent learning as well as facilitate cooperation both inside and outside the classroom. They were also encouraged to participate attentively in various collaborative and individual activities with the focus on the output production and individual performance. Therefore, it could be stated that this paper offers a practical solution to the improvement of ESP training at the Vietnamese tertiary level with the aid of technology and student-centered methodology.

6. Conclusion

In conclusion, the study has provided insightful contributions to the increasing interest in understanding the effectiveness of the flipped classroom model in ESP training and developing a conceptual model for implementing this method in a specific context like Vietnam. By linking these findings with relevant literature, this paper showed how flipped learning influenced on learners' academic performance in ESP learning. The results also indicated the relationship between the new teaching method and learners' improved attitudes, confidence level and engagement. Those results are quite consistent with other studies in flipped methodology (e.g. Zhongwen Liu, 2016; Da Liu, 2016; Bi Wen Lee, 2017; and Haghighi, 2013).

The paper also proved that this suggested model worked effectively in a performance-based educational system like Vietnam while very few studies considered the influence of the flipped classroom in the Vietnamese context (Thai, De Wever, & Valcke, 2017). Such investigation is extremely important because learning actually occurs when learners could sharpen their necessary skills and change their learning styles in a positive manner (Chen et al., 2014). Therefore, this paper explicitly provided new valuable theoretical and empirical contribution to the flipped learning theory by showing how this method could bring beneficial facilitation to the teaching and learning process in Vietnam. It not only could leverage learners' interest and engagement during the intervention but also enhance their skill mastery significantly. Therefore, Vietnamese instructors could be confident to implement the flipped classroom model into their own contexts. Moreover, curriculum designers and stakeholders could also adopt this method effectively to meet the needs of institutional digitalization within the Industry 4.0 and enhance their competitive advantages.

The paper has some limitations and several recommendations could be made for future research. First, this study is context-specific and involves a limited sample (N=40). Thus, a thorough understanding of flipped learning and brain-based teaching in ESP training could be more beneficial from empirical research with larger population, bigger sample size or longer time frame. Feedback can also be obtained from different teaching environments such as public and private universities. Moreover, the impact of flipped learning in ESP training might be different in other modules across this discipline. Therefore, this paper suggests future research revise the effectiveness of flipped learning in various ESP courses with different teaching practices. In addition, more research instruments such as observations, document analysis, and interviews could be exploited to investigate the actual in-class procedures, learners' real thinking as well as their gradual improvements through in-class assignments and formative assessments.

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APPENDIX 1

A QUESTIONNAIRE TO EVALUATE LEARNER' PERCEPTIONS TOWARDS THE EFFECTIVENESS OF FLIPPED CLASSROOM MODEL AND BRAIN-BASED TEACHING IN THE ESP CLASS

1. LEARNER'S BACKGROUND

1. Gender: ☐ Male ☐ Female
2. Hometown: ☐ Rural area ☐ Municipality
3. How long have you been studying English?
- ☐ 5-7 years ☐ 7-10 years ☐ more than 10 years
4. Has any of your previous teachers applied the flipped classroom model?
- ☐ Yes ☐ No

2. LEARNER'S PERCEPTIONS TOWARDS THE NEW METHOD MODEL

For question 5, please **CIRCLE** a number from 1 to 5 that is most closely the same as your situation. The scale of 1 - 5 represents the following ratings:

1 = least useful, 2 = a bit useful, 3 = useful, 4 = quite useful, 5 = most useful.

5. How useful were the following activities for your studying?

a. Video lectures	1	2	3	4	5
b. Preparatory tasks and Portfolio	1	2	3	4	5
c. Group forum	1	2	3	4	5
d. Engagement	1	2	3	4	5

e. Framing	1	2	3	4	5
f. Acquisition	1	2	3	4	5
g. Elaboration	1	2	3	4	5
h. Memory Strengthening	1	2	3	4	5

6. Do you think that the Video lectures can help you(Please **CIRCLE** the answers)

- ☐ become more prepared for the lessons? Yes No
- ☐ learn new vocabulary relating to the topics? Yes No
- ☐ learn specific grammar structures related to the lessons? Yes No

For questions 7-8, please **CIRCLE** a number from 1 to 5 that is most closely the same as your situation. The scale of 1-5 represents the following ratings:

1= strongly disagree, 2= disagree, 3= no opinion, 4= agree, 5= strongly agree.

7. Do you think that the Preparatory tasks and Portfolios can help you

- ☐ understand the lessons systematically? 1 2 3 4 5
- ☐ check your understanding and test your skills? 1 2 3 4 5
- ☐ revise for tests and exams? 1 2 3 4 5

8. Do you think that the Group Forum can help you

- ☐ do the exercises more effectively 1 2 3 4 5

☐ discuss and practice outside the classroom 1 2 3 4 5

☐ sharpen your skills with challenging tasks 1 2 3 4 5

9. Do you think that the Engagement step can help you (Please **CIRCLE** the answers)

☐ check your understanding of video contents? Yes No

☐ recall and consolidate prior knowledge? Yes No

☐ warm you up for the new lesson? Yes No

10. Do you think that the Framing help you.....(Please **CIRCLE** the answers)

☐ practice the lessons in contexts Yes No

☐ link vocabulary and grammar together for better understanding Yes No

☐ understand the lesson contents better Yes No

11. Do you think that the Acquisition step can help you.....(Please **CIRCLE** the answers)

☐ practice the language in communication? Yes No

☐ deepen your understanding with challenging tasks? Yes No

☐ be more proficient in using vocabulary and grammar? Yes No

12. Do you think that the Elaboration stage can help you (Please **CIRCLE** the answers)

- | | | |
|---|-----|----|
| <input type="checkbox"/> learn from strengths and weaknesses of your friends? | Yes | No |
| <input type="checkbox"/> understand the lessons better? | Yes | No |
| <input type="checkbox"/> refine your skills? | Yes | No |

13. Do you think that the Memory Strengthening can help you ... (Please **CIRCLE** the answers)

- | | | |
|---|-----|----|
| <input type="checkbox"/> summarise the lessons for memorizing? | Yes | No |
| <input type="checkbox"/> get used to the time pressure for testing? | Yes | No |
| <input type="checkbox"/> self-assess your understanding from the lessons? | Yes | No |

3. LEARNERS' SATISFACTION WITH THEIR PROGRESS

For questions 14-21, please **CIRCLE** a number from 1 to 5 that is most closely the same as your situation. The scale of 1-5 represents the following ratings:

1= strongly disagree, 2= disagree, 3= no opinion, 4= agree, 5= strongly agree.

- | | | | | | | |
|-----|--|---|---|---|---|---|
| 14. | I have improved my vocabulary a lot. | 1 | 2 | 3 | 4 | 5 |
| 15. | I could do grammar exercises better. | 1 | 2 | 3 | 4 | 5 |
| 16. | I could practice English more in this class. | 1 | 2 | 3 | 4 | 5 |

- | | | | | | | |
|-----|--|---|---|---|---|---|
| 17. | I could improve other soft skills in this class. | 1 | 2 | 3 | 4 | 5 |
| 18. | I could improve my specialized knowledge. | 1 | 2 | 3 | 4 | 5 |
| 19. | I could understand the lessons easier. | 1 | 2 | 3 | 4 | 5 |
| 20. | I could remember the lessons better. | 1 | 2 | 3 | 4 | 5 |
| 21. | My participation in this class was more than
in the previous class. | 1 | 2 | 3 | 4 | 5 |
| 22. | I became more cooperative and attentive
in this class than in the previous writing class. | 1 | 2 | 3 | 4 | 5 |
| 23. | If you could change or add anything to this course, what would your change be? | | | | | |

.....

...

.....

...

THANK YOU VERY MUCH FOR YOUR PARTICIPATION IN THE STUDY!

APPENDIX 2

RAW SCORES OF THE CLASSES

ESP 1 (Pre-test)				
STT	Experimental class	Control class 1	Control class 2	Control class 3
1	8	7.8	7.5	8.2
2	7.8	8.2	7.5	7.5
3	7	7.5	8.2	8
4	7.5	7.5	7.8	8.8
5	8.4	9	7.5	8.5
6	7.7	7.5	8.4	8.2
7	8.7	8.4	8	7.2
8	7.5	8	7.6	8.2
9	8.1	8	7.8	7.5
10	8.8	7.5	8.4	8.2
11	9.1	8.5	8.7	6.5
12	7.5	8.2	8	7.5
13	7.8	6.5	8.4	8

14	7.7	8	8.5	8
15	9	8.5	7.2	7.5
16	8.8	8	8.4	8.2
17	8.2	8.2	8.6	7.5
18	8.1	8.5	8	9
19	8.7	8.2	8.4	8
20	6.5	8.2	8.4	8.4
21	8.5	9	7.8	8.5
22	8.3	7.8	8	7.8
23	9	7.5	8.5	8.6
24	8.7	8.5	8	7.8
25	8.7	7	7.8	7
26	7.8	8.2	8	8.5
27	8.2	7.8	8.5	8.4
28	7.9	8.8	7.5	7.2
29	8.5	9	8	8.5
30	8.2	8	7.8	7
31	8.1	9.2	8.5	8.5

32	8	7.2	8.2	6.8
33	8	7	8.8	8.2
34	8.5	6.5	8.2	7.8
35	8	8.4	7.2	8.2
36	8.8	8.5	8.2	7.5
37	8.8	8.2	8	7.5
38	8.2	8.5	9	8.8
39	6.9	8	8.5	7.6
40	7.5	8	7.5	
41			7.8	
42			8.6	
43			7.5	

ESP 2 (Post-test)				
STT	Experimental class	Control class 1	Control class 2	Control class 3
1	7.5	8.2	8.5	7.2
2	9.6	7	8.5	7

3	9	8.2	8.5	7.8
4	9.2	7.6	8.2	8
5	9	9	7	8
6	9.3	8.8	7	7.8
7	7	8.9	8.2	7.5
8	8	8.2	7	8
9	9.8	8	7	7.8
10	8.5	6.5	8	7
11	8.5	8.6	8.4	7.4
12	8	7.5	7.6	7
13	8	8.3	8.6	7.8
14	9.4	8.8	7.5	7.8
15	9.8	8.3	6.6	8.2
16	9.3	7.6	8.6	8.8
17	8.6	8.1	7.8	7
18	9.2	7.5	8.4	8.2
19	8.4	7.4	7.5	7.2
20	9.5	7.6	7.8	8.4

21	8.7	4.6	7.5	8.2
22	8	8.2	7.6	7
23	8	6.2	7.6	8
24	7.2	7.5	8.1	8.8
25	8.6	7.6	7.5	6.9
26	8.3	8.4	8.1	7.8
27	9.4	9.5	8.2	8.2
28	8.1	8.2	8.1	7.2
29	9.1	9	7.2	8.2
30	8.3	8.6	7.1	7.5
31	9.2	8.9	7.6	7.5
32	8	7.6	7.9	6.6
33	7.2	7.5	8.2	7.8
34	8.5	6.2	7.1	7
35	8.3	9	7	7.6
36	9.5	9.2	7.4	8
37	8.3	8.6	9	7.2
38	8.3	8.7	7.8	8

39	7.5	8.6	7.7	7.2
40	9	7.5	7.9	
41			8.3	
42			9	
43			7.3	



EAP Instructors' Acceptance of Computer-Based Tests in English for Academic Purposes Instruction

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Biodata

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Abstract

Computer-based tests can play an important role in the language learning curriculum due to their benefits and advantages (Dashtestani, 2015b). This study set out to examine Iranian EAP instructors' attitudes towards using computer-based tests. Data were collected using two instruments i.e. questionnaires (n=54) and semi-structured interviews (n=26). The findings indicated that computer-based testing (CBT) can have a wide range of benefits for EAP instruction based on the perspectives of Iranian EAP instructors. However, there exist some pragmatic, accessibility, and curricular challenges and limitations in implementing CBT in the EAP context. Teachers' lack of familiarity with assessment principles in general and computer-based testing in particular is a serious barrier to adopt more technological assessment tools in EAP courses based on the findings of this study. It was also revealed that the use of paper-based tests is very common in the Iranian EAP context and computer-based tests are never used. The participants believed that several limitations should be removed in order to include computer-based testing in EAP courses

of Iran. The findings can provide evidence for re-consideration of traditional approaches to EAP testing and the need to provide the required infrastructures for technology integration in EAP instruction in Iran and many other similar contexts.

Keywords: CBT; technology; EAP; EAP instructors; assessment; attitudes; limitations

Introduction

Technology has established itself as an integral and vital component of teaching and learning practices nowadays (Bouck, Flanagan, Miller, & Bassette, 2012; Cloete, 2017; Istance & Kools, 2013; Okolo & Diedrich, 2014). Similarly, the application of computer-based tests has been popular in educational contexts and environments (Bayazit & Aşkar, 2012; Buerger, Kroehne, & Goldhammer, 2016; Chua, 2012; Chua & Don, 2013; Jeong, 2014; Kurosa et al., 2018; Nikou & Economides, 2016; Peterson, Gordon, Elliott, & Kreiter, 2004; Wang & Shin, 2010). Computer-based tests can play a significant role in the improvement of educational assessment. The merits of computer-based testing for students and teachers include the convenient system of scoring, high security, facilitation of test administration, and transformation of educational practices and curricular processes (Alderson, 2000; Brown, 2007; Scheuermann & Pereira, 2008; Wang & Shin, 2010). The field of language teaching is not an exception in this regard in that technology use can enhance the learning of a foreign or second language (Akele, 2014; Alsulami, 2016; Haswani, 2014; McDougald, 2013; Young, 2008).

Specifically, the topic of attitudes towards technology use in language teaching is a popular research line and a large number of language teaching experts have directed their attention towards this area of research (Albirini, 2006; Alzaidiyeen, 2017; Al-Zaidiyeen, Mei, & Fook, 2010; Kitchakarn, 2015; Liu, 2009; Özdamlı, Hürsen, & Özçinar, 2009; Tri & Nguyen, 2014). The studies have referred to students and teachers' positive responses and reactions towards technology use in education. At the same time, technology use in education is subject to a couple of barriers and limitations (Dashtestani, 2012). In the same way, several studies have been carried out in order to explore educational stakeholders' attitudes towards the implementation of computer-based testing in educational settings. The use of computer-based tests and students and teachers' attitudes towards them is another important research strand in this regard (Dashtestani, 2015b).

Computer-based testing in ESP instruction

As Stoica (2006) argues, the use of ESP assessment methods and tools should be reconsidered. In addition to traditional approaches to assessment, new methods and approaches should also be taken into account in ESP assessment. The implementation of computer-based assessment in ESP/EAP instruction would offer new opportunities for ESP teachers and authorities to pave the way for a more effective type of assessment (Tahmasebi & Rahimi, 2013). Sanchez-Meyes Penamaria and Torregrosa Benavent (2011) suggest that the use of computerized tests, especially the Internet-based ones, is nowadays considered as essential in the field of ESP. The most famous examples of these ESP tests might include iBT TOEFL and IELTS. Moreover, computerized adaptive testing can have several benefits for ESP assessment since the testing will be geared to the abilities of ESP learners.

Lesiak-Bielawska (2015) emphasizes the effectiveness of the use of technology for ESP pedagogy, including ESP assessment. She points out that technology can have various benefits for ESP testing. There are several course management and test developing software tools and applications such as Moodle or Blackboard Learn which can help ESP instructors develop well-designed and needs-based tests for ESP students. Variety is an important affordance that technology will allow ESP teachers to add to their specific tests. Different test items, methods, feedback types, etc. can be provided through the use of computer-based tests in ESP instruction. Computer-based testing allows ESP instructors to include multimedia in their tests and make the tests more interactive at the same time. More importantly, Lesiak-Bielawska (2015) maintains that computer-based tests will enable teachers and ESP authorities to assess students' knowledge, attitudes, skills, or competencies. Moreover, computer-based tests “empower learning and testing professionals with collaborative authoring instruments, accommodate participant needs with blended and multilingual delivery, and inform stakeholders about test results through meaningful analytics” (Lesiak-Bielawska, 2015, p. 12).

The other affordance of computer-based testing for ESP contexts is the possibility of implementing alternative assessment. Tailored ESP tests and computerized adaptive tests are two important test methods which can provide ESP instructors with valuable information about ESP students' levels of academic and general language proficiency in addition to their weaknesses and strengths (Lesiak-Bielawska, 2015). The use of web-based assessment is another merit of computer-based

testing for ESP instruction (Dashtestani, 2015a; Krajka, 2007). The other benefit of computer-based testing for ESP instruction is the fact that the use of technology can create authentic testing environments and more input-rich contexts for ESP assessment. As authenticity is a leading factor in ESP instruction and assessment, the use of videos, multimedia, and pictures will foster the level of authenticity in ESP testing (Chapelle & Douglas, 2006; Douglas, 2013; Lesiak-Bielawska, 2015).

Despite these affordances and merits of computer-based testing for ESP instruction, some serious challenges might exist. The first challenge is ESP students and instructors' digital literacy levels. For successful implementation of CBT in ESP contexts, both instructors and students should enhance their competence regarding the use of assessment technologies in the classroom. Another grave challenge is the lack of access to well-designed and needs-based assessment software tools and applications. More fundamental is ESP instructors' inadequate knowledge of testing and assessment for specific purposes (Alavi & Dashtestani, 2015). Therefore, the implementation of CBT in ESP instruction requires a reconsideration of instructors and students' assessment and digital literacy levels.

Literature Review

The majority of studies on attitudes towards computer-based testing have dealt with students' attitudes towards computer-based tests while the teacher element has been neglected significantly (Dashtestani, 2015b). As for teachers' attitudes towards and use of computer-based for their assessment and testing purposes, Tuparova et al. (2015) assessed teachers' attitudes towards electronic assessment, including three majors i.e. mathematics, computer science and Information technology. They reported that the teachers preferred to use traditional testing tools and methods due to their lack of knowledge about technological and innovative approaches to testing and assessment. Therefore, the element of teachers' knowledge of computer-based testing may have a direct influence on their use of and perspectives on computer-based tests. Jamil, Tariq, and Shami (2012) compared teachers' attitudes towards the use of computer-based tests versus traditional tests. The findings suggested that the overall attitudes of teachers towards the use of computer-based tests were positive, while the teachers preferred to use paper-based test in some specific situations. Moreover, teachers with more teaching experience or rank, and those who were trained

for the use of technology in teaching seemed to be more positive about the use of computer-based tests in their courses.

Regarding the English as a foreign language (EFL) context, Dashtestani (2015b) examined Iranian EFL teachers' attitudes towards computer-based testing. The results of the mixed-methods study indicated that Iranian EFL teachers were positive about the use of computer-based tests in EFL contexts. Some obstacles to the implementation of computer-based testing such as the low levels of teachers' digital literacy, teachers' low knowledge of designing and employing computer-based tests, and some curricular limitations were regarded as important. The EFL teachers mentioned several strategies in order to integrate computer-based testing in the EFL curriculum of Iran. Laborda and Litzler (2011) examined the attitudes of EFL teachers of the challenges and limitations of computer-based testing. They reported that the teachers had positive attitudes towards computer-based assessment after receiving the relevant training on computer-based assessment. It was concluded that training regarding the elements of computer-based testing can have significant effects on teachers' attitudes.

As for the studies conducted in ESP contexts, Pop and Slev (2013) examined the effectiveness of two Web 2.0 communication tools for assessing academic speaking proficiency of ESP students. Two applications i.e. Audioboo and Eyejot were utilized in the study. The findings of this study depicted that ESP assessment of speaking could improve the quality of evaluation. One significant affordance of computer-mediated assessment of speaking was the provision of immediate and more memorable feedback. The use of computer-mediated assessment further enhanced students' levels of digital literacy. In another study, Dashtestani (2015a) carried out a study on testing academic vocabulary through web-based tests in the EAP context. Four groups of EAP students from four disciplines i.e. biology, political sciences, psychology, and law participated in the study. The EAP students from different disciplines showed positive attitudes towards the implementation of web-based testing. The students also reported to have high levels of self-efficacy and confidence in using web-based tests of academic vocabulary. It was suggested that web-based testing can be a viable and staunch tool to improve the quality of assessment in EAP courses. Kavaliauskienė (2013) explored an online self-evaluation approach in an ESP context. The findings indicated the effectiveness of the online self-evaluation system from the perspectives of students. The study offered online testing paired with self-assessment as appropriate instruments for boosting the

quality and efficacy of ESP testing and assessment. Following the same research strand, Khoshshima, Hosseini, and Toroujeni (2017) reported on a study about comparing the effectiveness of computer-based tests versus paper-based ones in ESP instruction. The results revealed that computer-based tests can be staunch alternatives for traditional paper-based tests in ESP contexts. Even though there was not a significant difference among the scores of the students in both the computer-based and paper-based tests, the students showed a preference for computer-based tests. There was not a significant difference in male and female students' performance in the paper-based and computer-based tests.

EAP is “the teaching of English with the specific aim of helping learners to study, conduct research or teach in that language” (Flowerdew & Peacock, 2001, p. 8). Technology can have a tremendous effect on the quality of EAP instruction (Alavi, Borzabadi, & Dashtestani, 2016; Arnó, 2012; Dashtestani & Stoikovic, 2016; Plastina, 2003). Despite the presence of several studies on teachers' attitudes towards computer-based tests, no well-documented studies have been conducted on the role of EAP instructors' attitudes in the implementation of computer-based testing. Therefore, the present study is an attempt to investigate Iranian EAP attitudes towards computer-based testing and its possible obstacles, limitations, and challenges. The following research questions were posed in this study:

1. What are Iranian EAP instructors' attitudes towards using computer-based tests in EAP courses?
2. What are Iranian EAP instructors' perspectives on the challenges to the use of computer-based tests in EAP courses?
3. What are Iranian EAP instructors' perspectives on the strategies to adopt to use computer-based tests in EAP courses?
4. What types of computer-based tests are used in Iranian EAP courses?

Methodology

This study is founded on two instruments i.e. questionnaires and semi-structured interviews. Since in EAP research methodology, triangulation is an important principle (Jordan, 1997), both qualitative and quantitative methods were included in the study.

Instruments

A Likert-item questionnaire was adapted from Dashtestani (2015b). The questionnaire included three sections i.e. instructors' attitudes towards computer-based tests, instructors' perspectives on the challenges to the use of computer-based tests, and perspectives on the strategies to adopt to use computer-based tests. The questionnaire contained a total of 37 items. The first section of the questionnaire comprised 16 items (Cronbach's Alpha=0.89), the second section was consisted of 13 items (Cronbach's Alpha=0.92), and the last section included 8 items (Cronbach's Alpha=0.9). The Likert scales included five points from strongly disagree to strongly agree. The content validity of the questionnaire items was established by inviting five university professors of EAP and CALL to comment on the items. Several sessions were held in order to improve the items of the questionnaire. Some modifications and additions were implemented based on the comments of the panel of experts to enrich the questionnaire and adapt the items to the requirements and context of EAP. The questionnaire was piloted using 10 EAP instructors and further amendments were made on the items of the questionnaire.

The second instrument of the study was semi-structured interviews. The questions of the interviews were focused on some issues such as EAP instructors' attitudes towards computer-based tests, EAP instructors' perspectives on the limitations and challenges of the implementation of computer-based testing in EAP instruction, ESP instructors' perspectives on strategies and measures to include CBT in EAP instruction, and the types of tests that EAP instructors use in their EAP courses. The content validity of the questionnaire was ensured by inviting five university professors of EAP and CALL to comment on the items. The focus of the interview was the same as the aims of the questionnaires in order to provide validated and triangulated data.

Formal consent forms were submitted to the participants before carrying out the study. In the consent form, the general aims and objectives of the study were included for the participants. All participants volunteered to participate in the study and those who were not willing to fill in the questionnaires or take part in the interviews were excluded from participating in the study.

Participants

The EAP instructors who participated in the questionnaire study were 54 university instructors of EAP who taught EAP in the faculties of engineering, social sciences, and arts at eight Iranian universities. The instructors had an average of 4.8 years of teaching EAP. 45 participants were MA holders and the rest were PhD holders. All of the participants believed that their digital literacy level was above intermediate. Both males and females were included in the study. After administering the questionnaires, a total of 26 EAP instructors accepted to take part in the interview part of the study. All the participants were those who were acquainted with CALL and the use of technology in language learning. Those who were not informed of CALL and technology use in language teaching contexts were excluded from the study.

Data Analysis

For the questionnaire data, descriptive statistics, including the mean and standard deviation for each item was calculated and presented. Content analysis was performed to identify the common themes mentioned by the interview participants. Two coders were used to code the data and report the common themes they analyzed. An inter-rater reliability test was conducted to identify the level of consistency of the coding.

Results

Iranian EAP instructors' attitudes towards using computer-based tests in EAP courses

Questionnaire

The questionnaire results shows the positive reactions of Iranian EAP instructors' towards the use of computer-based tests in EAP instruction. The perceived benefits of CBT included possibility of using different test methods, cost-effectiveness, provision of instant feedback, authentic assessment, enhancing testing security, provision of different feedback forms, limited space for storing answers, developing student motivation, instructiveness, and ease of administration (Table 1).

Table 1. Attitudes Towards Computer-Based Tests

Items	Mean	SD
CBT increases student participation	3.85	1.03
CBT provides the opportunity to use different test methods	4.13	0.89
CBT is easy to be designed for EAP purposes	3.07	0.72
Designing a CBT is cost-effective	4.03	0.8
Instant feedback can be given to students using CBT	4.22	0.88
Students can have chances of authentic assessment via CBT	4.31	0.72
CBT can enhance testing security	4.27	0.92
Different feedback forms can be provided via CBT	4.24	0.84
Limited physical space is required to store answer scripts of CBT	4	1
Using CBT improves the reliability of EAP assessment	3.76	1.08
The use of CBT is motivating for EAP students	4.02	0.84
CBT can be interactive by the use of multimedia	4.14	0.76
CBT is easy to be administered	4.26	0.55
CBT can be administered everywhere at anytime	4.33	0.58
Using CBT improves impartiality in EAP testing	4.11	1.09
CBT can be immediately scored	4.28	0.96

Interview

The interview results also showed the positive attitudes of the EAP instructors towards computer-based tests. The perceived merits of CBT for EAP instruction included ease of administration, ease of scoring, conformity with the needs and styles of students, being time-saving, provision of

computer-based feedback, provision of immediate feedback, and possibility of changing traditional approaches to testing through the use of computer-based tests (Table 2).

Table 2. Attitudes Towards Computer-Based Tests

Themes	Percentage of mentioning the theme
Theme 1: Ease of administration	88.46
Theme 2: Easy scoring system	84.61
Theme 3: Conformity with the needs and styles of EAP students	76.92
Theme 4: Less time consuming for EAP instructors	80.76
Theme 5: Possibility of providing computer-based feedback	73.07
Theme 6: Providing immediate feedback	69.23
Theme7: CBT as an opportunity to change traditional testing approaches to more modern ones	76.92

Iranian EAP instructors' perspectives on the challenges to the use of computer-based tests in EAP courses

Questionnaire

As Table 3 reveals, there exist some perceived challenges to the use of computer-based tests in EAP instruction. The participants believed that there is a lack of major-specific computer-based tests, EAP instructors lack testing knowledge to develop computer-based tests, EAP instructors lack technological knowledge on how to develop computer-based tests, EAP instructors lack knowledge how to use computer-based tests, there is lack of technological facilities to use CBT, computer-based tests are not accessible to EAP instructors, there is a lack of support from

educational authorities to help EAP instructors use/develop computer-based tests, there is a lack of training/education on how to use/develop computer-based tests, and some EAP students may lack digital literacy in order to use computer-based tests.

Table 3. Challenges to the Use of Computer-Based Tests

Items	Mean	SD
There is a lack of major-specific computer-based tests	4.74	0.52
EAP instructors lack testing knowledge to develop computer-based tests	4.37	0.79
EAP instructors lack technological knowledge on how to develop computer-based tests	4.59	0.79
EAP instructors lack knowledge how to use computer-based tests	4.40	0.80
There is lack of technological facilities to use CBT	4.46	0.72
Computer-based tests are not accessible to EAP instructors	4.35	0.85
Lack of support from educational authorities to help EAP instructors use/develop computer-based tests	4.05	1.2
Lack of training/education on how to use/develop computer-based tests	4.36	0.8
Computer-based tests are costly to develop	3.85	0.95
CBT cannot be used for testing different language skills	2.98	0.81
Some students might show resistance to CBT	2.87	0.9
There is lack of test security when computer-based tests are used	2.68	1.1
Some EAP students may lack digital literacy in order to use computer-based tests	4.16	1

Interview

Based on the values of Table 4, instructors' lack of assessment and testing knowledge, instructors' lack of familiarity with EAP testing technologies, a lack of proper computer-based facilities at universities, limited access to major-specific testing software tools, and EAP students' lack of familiarity with EAP testing software tools were the perceived limitations of using computer-based tests in EAP instruction.

Table 4. Challenges to the Use of Computer-Based Tests

Themes	Percentage of mentioning the theme
Theme 1: Instructors' lack of assessment and testing knowledge	92.30
Theme 2: Instructors' lack of familiarity with EAP testing technologies	88.46
Theme 3: Lack of proper computer-based facilities at universities	80.77
Theme 4: Limited access to major-specific testing software tools	92.30
Theme 5: EAP students' lack of familiarity with EAP testing software tools	76.92

Iranian EAP Instructors' Perspectives on the Strategies to Adopt to Use Computer-Based Tests in EAP Courses

Questionnaire

Several strategies were proposed for the use of computer-based tests in EAP instruction. These strategies included improving computer-based facilities to use computer-based tests in EAP courses, providing EAP instructors with software tools required for CBT, training EAP instructors to develop/use computer-based tests, enhancing EAP instructors' level of technological knowledge, enhancing EAP instructors' level of assessment knowledge, providing easy access to suitable computer-based tests for EAP instructors, encouraging EAP instructors to use CBT in their

assessment practices, and shifting current traditional approaches of EAP to testing and evaluation (Table 5).

Table 5. Strategies to Adopt to Use Computer-Based Tests

Items	Mean	SD
Improving computer-based facilities to use computer-based tests in EAP courses	4.35	0.55
Providing EAP instructors with software tools required for CBT	4.54	0.63
Training EAP instructors to develop/use computer-based tests	4.33	0.95
Enhancing EAP instructors' level of technological knowledge	4.16	1.04
Enhancing EAP instructors' level of assessment knowledge	4.07	0.91
Providing easy access to suitable computer-based tests for EAP instructors	4.14	0.9
Encouraging EAP instructors to use CBT in their assessment practices	4.06	1.05
Shifting current traditional approaches of EAP to testing and evaluation	4.29	0.79

Interview

The interview results indicated some important perceived strategies, including providing the relevant technological facilities for CBT implementation in EAP courses, providing access to EAP CBT software tools, producing needs-based and localized EAP software tools for different majors, Training EAP students and instructors how to use computer-based tests in EAP courses (Table 6).

Table 6. Strategies to Adopt to Use Computer-Based Tests

Themes	Percentage of mentioning the theme
Theme 1: Providing the relevant technological facilities for CBT implementation in EAP courses	84.61
Theme 2: Providing access to EAP CBT software tools	80.77
Theme 3: Producing needs-based and localized EAP software tools for different majors	76.92
Theme 4: Training EAP students and instructors how to use computer-based tests in EAP courses	73.07

Computer-Based Tests Used in Iranian EAP Courses

Interview

In response to the type of EAP tests used in EAP courses, all participants reported that they commonly used paper-based tests in the form of final exams or mid-term exams. It seems that traditional summative assessment was a common testing tool in the Iranian EAP courses. Moreover, the participants mentioned that they did not make use of any computer-based tests for assessing their students in EAP courses. Of course, the participants mentioned that they designed the tests themselves and they sometimes used Internet-based texts to construct EAP tests.

Discussion and Conclusion

The present research study was based on a mixed-methods design using both qualitative and quantitative data. Both interviews and questionnaires were used in order to present a more comprehensive picture of the use of computer-based tests in the Iranian EAP context based on analyzing the perspectives of EAP instructors.

The quantitative data analysis was indicative of the positive reactions of EAP instructors to using computer-based tests in EAP courses. This finding was approved in both the qualitative and quantitative phases of the study. This finding is also in accordance with previous research revealing the positive attitudes of university and ESP instructors towards computer-based testing (e.g. Dashtestani, 2015a; Dashtesani, 2015b; Kavaliauskienė, 2013; Khoshsima, Hosseini, & Toroujeni, 2017; Laborda & Litzler, 2011; Pop & Slev, 2013). This positive response of EAP instructors is very important and shows that the teacher element of CBT implementation is ready to accept fundamental changes regarding testing approaches and techniques in EAP instruction. Therefore, the study has made a case for the inclusion of technology in EAP instruction. It is essential to facilitate the integration of more modern and technological approaches to EAP testing in mainstream EAP courses in Iran. Since EAP courses must be designed based on the present and target needs of EAP students, it can be argued that CBT can be a very flexible tool to meet the assessment needs of students. As it was shown in the questionnaires and interviews, the use of computer-based tests can have several implications for EAP instruction. The opportunity to have access to immediate and different types of feedback forms as well as a more staunch and convenient approach to scoring were important advantages of computer-based tests based on the perspectives of EAP instructors. These findings suggest that EAP instructors are aware of the benefits of learning technologies for their teaching practices despite the fact that technology has not been integrated into EAP courses. The identification of instructors' attitudes towards different learning technologies allows for a more realistic and efficient course planning.

Apart from the positive views of EAP instructors, pragmatic and curricular barriers are not few. One important requirement for implementing CBT is the presence of the required pragmatic, attitudinal, educational infrastructures and foundations. The comments of the majority of EAP instructors showed that different knowledge types need to be developed in order to use computer-based tests in EAP courses. This finding is in line with the findings of Laborda and Litzler (2011) which referred to the lack of teachers' competence and knowledge to use computer-based tests. The study supports the fact that training regarding digital literacy, assessment principles, and the use of digital assessment is a necessary condition for enabling teachers to cope with the complexities of computer-based testing. Furthermore, access to well-designed and needs-based computer-based tests which can be used for the specific needs of EAP students is an undeniable need of EAP students based on the views of EAP instructors. It is apparent that developing EAP

computer-based tests is a collaborative enterprise in which different stakeholders, including EAP instructors, content instructors, and experts of IT and computer sciences, should be involved. Large-scale and small-scale needs analysis projects should be conducted to identify specific and context-based needs and requirements of EAP students, especially those ones which are related to the use of technology in EAP courses.

The study also took the perceived and proposed strategies of EAP instructors into account. The strategies were all proposed to remove the limitations and challenges which were mentioned by the instructors previously. It seems that more attention should be paid to teachers in an interactive curriculum. The top-down views to EAP curriculum development should be changed so that teachers and students play a more significant role in expressing their needs and preferences. CBT workshops and training courses can be held in which teachers will update their knowledge of CBT and enhance their confidence level regarding the use of technology. Also, facilities required for successful implementation of CBT should be provided. These strategies are not impossible to be actualized provided that financial, pragmatic, and attitudinal factors and impediments are taken into consideration and finally accommodated.

The results also depicted that the Iranian EAP instructors did not use computer-based tests for their assessment purposes. This is not a problem itself, but considering the future of education and the tremendous influence of educational technologies, adopting technology-enhanced approaches to teaching and testing is inevitable and vital. Therefore, it is a wise strategy to encourage and motivate both students and teachers to foster their digital literacy and become familiar with new innovations in the field of learning technologies.

There were limitations which influenced the study and its conduction. The first one was that EAP students could not be considered for this study since they were not exposed to CBT and their comments and perspectives could be invalid without sufficient exposure. Examining EAP students' attitudes towards CBT could have very important implications for EAP instruction. Thus, it is recommended that future research focus on EAP students' attitudes towards and use of computer-based tests as well. Also, other stakeholders such as EAP materials designers could have insightful views on the use of computer-based tests in EAP instruction, while it was not possible to access them for the researcher.

Implications and Suggestions for Further Research

This study was carried out to uncover Iranian EAP instructors' perspectives on the possibility of implementing computer-based testing in the EAP context. The results can have several practical and theoretical implications for other EAP contexts around the world. Based on the findings of this study, it is paramount to identify the attitudes and reactions of ESP/EAP instructors' towards technology use in assessment in other EAP/ESP contexts. The negative attitudes of instructors towards CBT may discourage them from its use in their teaching and pose serious challenges for EAP authorities and decision-makers regarding incorporating technology into EAP assessment. Therefore, this line of research is a prerequisite for successful inclusion of technology in EAP courses. In other contexts, EAP teachers should be regarded as an integral part of the curriculum regarding any decision-making processes and their attitudes should be taken into account by educational planners and authorities. EAP educational authorities should encourage the implementation of research studies on the challenges and possible affordances of CBT for EAP/ESP assessment from the perspectives of ESP instructors and students. Without a clear understanding of EAP stakeholders', including students and instructors, perceptions and attitudes towards new technologies and their effect on EAP instruction or assessment, it is not possible to include technology in ESP/EAP courses.

Since authenticity plays a pivotal role in ESP/EAP instruction, the assessment procedures and tools should provide students with authentic input in order to have a more effective and accurate assessment. To this end, more awareness-raising measures should be taken by EAP authorities to make EAP instructors aware that not only technology is an effective tool for teaching, but it can be a suitable tool for assessing in EAP contexts. At present, many instructors might avoid using technology for assessment purposes due to their low digital literacy, low assessment literacy, and at times the lack of access to technology. Specific workshops and courses with the aim of fostering EAP instructors' knowledge of using technology in assessment should be held in order to update instructors' knowledge of both technology and assessment. Even in contexts in which technology has been successfully integrated into ESP assessment, training is an unavoidable measure to take since a plethora of new online and offline assessment tools are developed from time to time and instructors need to know how to choose the most effective tools and how to use them appropriately

in the classroom. Thus, future research should delve into fostering instructors' criticality in the selection of computer-based assessment tools and their proper application in the classroom.

One important implication of this study might be the fact that instructors' actual use of a technology can be different from their attitudes towards technology. This study showed that the instructors adopted positive attitudes towards CBT while they did not use any computer-based tests in their teaching practices. This discrepancy of attitudes and practice indicates that even positive attitudes cannot guarantee the actual and frequent use of a technology by instructors. It is therefore recommended that both attitudes and actual practices be studied and taken into consideration by future researchers. Educational authorities and decision makers should also identify the gap between instructors' attitudes and actual practices in ESP courses and strive to reduce this gap by removing possible barriers and impediments. In order to persuade instructors and students to use technology for assessment many practical and pragmatic measures and strategies should be taken into account.

Of utmost importance is fostering EAP instructors' assessment and digital literacy. Both of these concepts are challenging ones in most Asian and developing countries. EAP instructors do not feel a need to foster their assessment and digital literacy. This issue is due to the fact that in many countries traditional approaches to assessment and teaching are still popular and conventional. Technology has the potential to revolutionize educational practices and traditional teaching beliefs. Therefore, different digital literacy skills and components as well as assessment skills should be identified and continuous training courses and workshops should be provided for pre-service and in-service EAP instructors in this regard. It is also ideal to include needs-based digital literacy and assessment courses in mainstream TEFL teacher education/preparation courses. Many instructors might also be unaware of these important needs and therefore this is the duty of educational authorities to make instructors aware of their changing and demanding teaching needs and requirements.

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A Technological Pedagogical Content Knowledge (TPACK) Framework for ESP Teachers in Tertiary Education in China

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Abstract: This study reports the development and validation process of a Technological Pedagogical Content Knowledge (TPACK) Framework for English for Specific Purposes (ESP) teachers in Tertiary Education in China. The survey, called TPACK-ESP, aims to provide an assessment tool for ESP teachers that addresses subject-specific pedagogies and technologies. Using a mixed methods

approach, survey items were generated first using qualitative methods (e.g. literature review and structured interview). The survey is then validated through exploratory factor analysis (EFA), with 125 experienced ESP teachers from diversified universities and colleges in China. The results indicate a seven-factor structure including a total of 21 items: 3 Technology Knowledge (TK); 2 Content Knowledge (CK), 3 Pedagogical Knowledge (PK), 4 Pedagogical Content Knowledge (PCK), 4 Technological Content Knowledge (TCK), 3 Technological Pedagogical knowledge (TPK) and 2 TPACK. The proposed TPACK Framework is applied to 129 surveys for the current situation of ESP teachers' TPACK competencies. The result of the survey reveals a positive disposition towards PK and PCK. Implications for how should the academy make use of the TPACK-ESP Framework are discussed.

Key words: TPACK, ESP teachers, teacher education

Introduction

The newly-published Guidance for College English Teaching (2017) in China indicates that the course system and teaching objectives of the College English should gradually shift from the previous English for General Purpose (EGP) to English for Specific Purpose (ESP) which include English for Academic Purposes (EAP) and English for Professional Purposes (EOP). It defines that ESP courses should combine specific subject content with language teaching objectives, with its teaching activities focus on solving language problems encountered in the student's subject knowledge learning process to cultivate students' subject-related English skills.

Generally speaking, ESP is developing fast these years. A good number of universities have ESP courses, such as Tsinghua University, China University of Political Science, Beijing Institute of Technology and so forth. Besides, higher vocational colleges also present ESP courses with different focuses and features, such as tourism English, English in nursing, English used in exhibition, which aim to make learners prepared for their future job. Moreover, an official committee "English for Specific Purposes Committee (ESPC) of China Foreign Languages Education association" was set up in 2011, and the official journal "Chinese Journal of ESP" was launched since 2010.

However, compared with the development of ESP abroad, ESP research in China lags 20 years behind. Some researchers have already pointed out the problems in ESP development in China. To be more

specific, lack of consensus understanding of and concern on ESP (Cai, 2013), lack of rational course design and insufficient ESP course hours (Zhang & Hu, 2001; Peng & Xu, 2004), lack of highly qualified ESP teachers (Han, Zhu & Wei, 2003) and so forth. All in all, the ESP field still has long way to go in establishing its professional status within institutions, standardizing its body of knowledge and skills and formalizing teacher education.

And yet, among all these challenges, promoting the quality of ESP teachers is of top priority. However, in the words of many scholars, ESP teacher education is a neglected area in ESP, because of a lack of awareness on the competencies required for ESP teachers (Jackson, 1998; Yu, Luo, Sun & Strobel, 2012). Zhang (2011) analyzes 535 papers in *English for Specific Purposes: an International Journal* from 1980-2010, and reports that papers on teacher education (including teacher competency) only account for 4.86% of the total papers reviewed. Hewings (2002) explores articles over two decades in the journal *English for Specific Purposes (ESPj)* and states that a fairly small number of papers are about ESP teacher preparation (including teacher competency) throughout the two decades. However, where should we start the ESP teacher training?

To answer this question, we should expand our vision to the overall education reform. The increasingly developed intelligence of information technology brings possibilities for a shift of learning and teaching paradigm from teacher-centered to learner-centered and now is on its way towards learner-driven. Prevailing ideas such as life-long learning and Open Educational Resources (OER) alongside abundant new concepts or platforms, for example, MOOCs, SPOCs, iTune, blended learning, Personal Learning Environment and numerous learning APPs characterize the learning in the modern society. Those changes pose a challenge to the teacher-centered passive ways of teaching. The “use of technology in education is not new . . . [and] successive waves of technological innovations has forced changes in conventional methods and tools of education” (Demirbilek, 2010, p. 238). Donnelly (2010) stated, “It is important to seek best practices for how to combine instructional strategies in face-to-face and computer-mediated environments that take advantage of the strengths of each, and avoid their weaknesses” (p. 350).

To cope with these challenges, we have to ask ourselves how teachers can make full use of Information and Communication Technology (ICT) in classrooms to satisfy learners’ personalized learning needs to improve the quality and effectiveness of teaching? How can we employ ICT to facilitate deeper

change in language education or more specifically the ESP teaching? To address the challenges, an important theoretical framework--the Technology, Pedagogy, and Content Knowledge (TPACK) emerges to guide research in teachers' use of ICT.

Koehler and Mishra (2005) introduce the term Technology, Pedagogy, and Content Knowledge (TPCK) as a conceptual framework to describe the integrative and transformative knowledge of teachers to effectively teach with technology. In 2007, TPCK was changed to Technology, Pedagogy, and Content Knowledge (TPACK) for the ease of pronunciation (see Thompson & Mishra, 2007–2008). A review of 629 journal papers entitled TPACK indicates that TPACK theory has gone through three stages, named early exploratory stage (2005-2008), development stage (2009-2011) and booming stage (2012 till now). It is suggested that future TPACK studies should focus on specific subject and improve the measurement tools for TPACK as well (Zhang et al., 2015). A review of 74 journal papers that investigate ICT integration from the TPACK framework indicates a mixed use of both qualitative and quantitative methods. Besides, TPACK has yielded positive results in enhancing teachers' capability to integrate ICT for instructional practice (Chai et al., 2013).

Previously, empirical research has mostly focused on two subject-specific domains, science (Jiang & Chang, 2016; Lin et al., 2013) and mathematics (Dikkartin Ovez & Akyuz, 2013). Most recently, TPACK research expands rapidly and tends to attract attention of more diversified disciplines and a larger scope of educational institutions. A few TPACK studies examine in-service teachers' TPACK development in universities (Jiang & Chang, 2016; Köse, 2016) and Special Education (Kaplon-Schilis & Lyublinskaya, 2017). Some scholars also design short term or long term ICT-programs to facilitate teachers' TPACK development (Tai, 2015; Hofer & Harris, 2016; Koh et al, 2017; Ersanli, 2016; Aguinaldo, 2017; Mourlam & Bleecker, 2017). However, the literature on TPACK studies in language teaching has been scarce. Recently, there is an increasing number of TPACK development and application programs in English language teaching which helps improving in-service and pre-service teachers' performance in using technology to support teaching (Liu et al, 2014; Voogt et al, 2016; Piotrowski & Witte, 2016). Moreover, the relationship among the subscales of the TPACK framework (Wang et al, 2017; Phillips et al, 2017), factors that affect teachers' uses of TPACK (Voogt et al, 2017) and the difference between pre-service and in-service teachers TPACK learning (Hofer & Harris, 2017) gradually draws attention.

As can be seen from the above discussion, TPACK Framework for teacher development is of essential importance because qualified teachers are the key to the implementation of instruction, the same as for ESP teachers (Framework, 2013). In regard to the importance of TPACK Framework for ESP teacher development and the vacancy of it under Chinese context, as well as the current reform policy to make ESP as a part of college English course system, this paper sets China as an example to explore the ESP-specific TPACK framework in tertiary education. Preparing teachers to integrate technology into ESP teaching is an important goal. To make explicit the aims of the study, the following main research questions are proposed within the Chinese context:

1. How can the ESP Teacher Competency Framework be constructed and validated?
2. What is the current situation of the ESP teachers' TPACK competencies?

By presenting a brief review of the research on language teachers' TPACK in China and overseas as a way to identify research gaps, this study presents a Proposed ESP Teacher TPACK Framework based on a three-phase descriptive study. The authors expect the TPACK Framework for ESP teachers will be used to guide pre-service and in-service preparation of ESP teachers, to guide the accreditation of preparation programs, and to influence the selection of qualified ESP teachers.

1. Research on Language-Teaching-Related-TPACK in China and Abroad

1.1 Definition of TPACK

TPACK framework is built on Shulman's (1986, 1987) PCK, which describes how teachers apply technologies in PCK to achieve effective teaching. The most complete description of TPACK is put forward by Mishra and Koehler (2006) and Koehler and Mishra (2009).

Pedagogical Knowledge (PK)

PK refers to teachers' knowledge about teaching and learning process and practice or methods. It involves educational purposes, values and aims. This generic form of knowledge includes general classroom management skills, knowledge about techniques or methods used in the classroom, the nature of target audience, and lesson planning and learner assessment (Koehler & Mishra, 2009).

Technological Knowledge (TK)

TK is knowledge about ways of thinking about and working with technology, tools and resources. It means how a person can work with ICT, how they can overcome technical problems and how they learn new skills in this area. TK is always in a flux and developmental state which requires life-long and open-ended interaction with ICT.

Content Knowledge (CK)

As Shulman (1986) notes, content knowledge included knowledge of concepts, theories, ideas, knowledge of evidence and proof, as well as established practices and approaches toward developing such knowledge. In Richards' (2011, p. 5) words, content knowledge refers to what (language) teachers need to know about what they teach, for example, language teaching itself, and constitutes knowledge that would not be shared by teachers of other subject areas.

Pedagogical-content Knowledge (PCK)

PCK knowledge includes knowing what teaching approaches fit the content, and likewise, knowing how elements of the content can be arranged for better teaching (Mishra & Koehler, 2006). It includes knowledge about connecting different content-based ideas, activating learners' prior knowledge, adopting alternative teaching strategies, getting to know learners' learning strategies, etc.

Technological Pedagogical Knowledge (TPK)

TPK deals with how using technology and its benefits and constraints influence teaching and learning, including knowing disciplinary pedagogical applications and constraints of technological tools and appropriate pedagogical designs and strategies.

Technological Content Knowledge (TCK)

Technological content knowledge (TCK) is knowledge about the manner in which technology and content are reciprocally related (Mishra & Koehler, 2006). On the one hand, technologies can provide new or even fundamental perspectives for understanding the natures of the disciplines. On the other hand, the content can dictate or even change the technology.

Technological, Pedagogical, and Content Knowledge (TPACK)

TPACK connects all previously mentioned areas and thus integrates what to teach with which technology and how this influences the situation of teaching and learning. It involves an understanding of the representation of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that learners face. (Koehler & Mishra, 2009).

In the diagram shown in Figure A, the outer-dotted circle labeled “contexts” means, the technology, pedagogy, and content are represented in specific learning and teaching contexts.

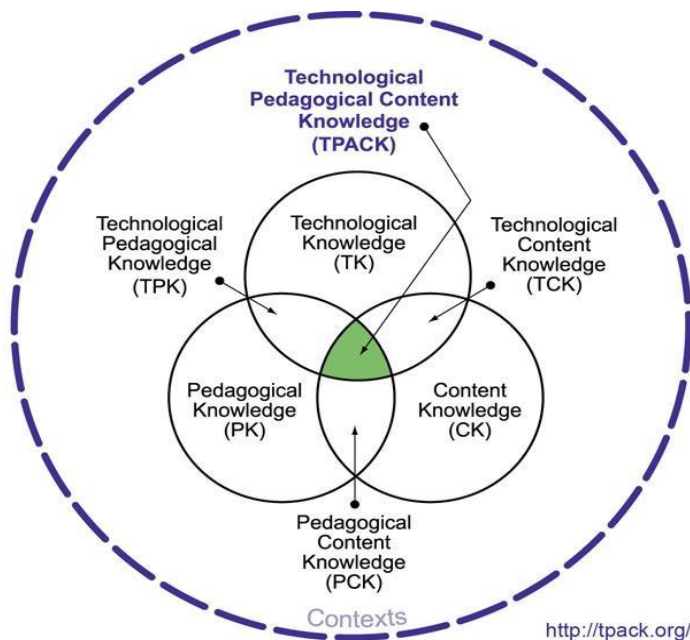


Figure A: The TPACK Framework (2012) (reproduced by permission of the publisher, <http://tpack.org/>).

Matthew, Koehler, Mishra, and William claim that TPACK framework assists in the development of better techniques for discovering and describing the implementation of technology-related professional knowledge in practice. The TPACK framework makes it possible for teachers' use of technology in a more ecological way, promoting research in teacher education and teacher professional development.

1.2 Language-Teaching-Related-TPACK Research in China

ESP-specific TPACK research in China is still at the theoretical level. Guo (2012) states ESP teacher qualification could be attributed to the following three categories: language skills, professional knowledge, and teaching ability. Ren (2013) analyzes the knowledge frame required for a qualified ESP teacher, including English language knowledge, disciplinary knowledge, and ESP theory and teaching methodology. Zou (2015) has carried out a qualitative research on ESP teachers' PCK in China and set up a model including the following five knowledge domains: English subject knowledge, knowledge of other disciplines, knowledge of learners, contextual knowledge, and knowledge of English teaching. The specific knowledge for ESP teachers in each domain is illustrated.

Zhang, Lin and He (2015) investigate the features of college English teachers' TPACK from four dimensions and suggest highlighting TPACK in foreign language teacher education, fostering teachers' interest and self-reliance in technology integrated teaching, constructing teacher professional learning communities as well as a support mechanism. Hu & Jin (2015) sets English courses construction combined with TPACK for examples to inspire College English Language Reform in China. Wu and Wang (2015) assessed EFL teachers' TPACK, and reported that the EFL teachers were likely satisfied with their overall TPACK, and had particularly strong confidence in PK while they were less competent in term of TK.

Wang (2016), for the first time, develops a tertiary level preliminary TPACK assessment in English language for the EFL teachers to self-evaluate their TPACK needs by using a mixed methods approach (questionnaire, interview, and classroom observation).

1.3 ESP-Related-TPACK-Research Abroad

Jarvis (1983) summarizes 10 general competencies ESP teachers should have which belong to different bodies of TPACK, such as to analyze ESP and scenarios, to evaluate textbooks and related materials, to design and interpret programs and to compile teaching materials etc. Dudley-Evans & St. John, (1998) point out that in the fields of ESP teaching, "knowledge" includes professional knowledge of English education, the disciplinary knowledge that ESP teachers teach, and eight aspects of information collected after the target learners "Needs Analysis", which include professional information, personal information, English language information and language learning information

about the learners, etc.

Górska-Poręcka (2013) pilot studies a structure of ESP teacher's cognition and concludes that ESP teachers' PCK include three knowledge bases: the language knowledge base, the subject content knowledge base, and the pedagogical knowledge base. Moser and Ivy (2013) conduct the first TPACK study specifically related to world language teachers (teachers who teach other foreign languages). They explore 101 secondary world language teachers' perceptions of their TPACK and technology integration.

Baser, Kopcha & Ozden (2015) develop and validate the first TPACK survey named TPACK-EFL to assess pre-service EFL teachers' knowledge of using technology to enhance English teaching. Both qualitative TPACK survey development and quantitative survey validation are applied. The TPACK-EFL includes a total of 39 items which give a close hint to the research of the TPACK Framework for ESP teachers. Tai et al (2015) apply the TPACK model to design an online English writing course for nursing students, and suggests it as a comprehensive and effective teaching approach in enhancing students' English writing performance.

Piotrowski (2016) constructs a TPACK instrument for English language instructors by using mixed methods in an Iranian university. It reveals that the instructors' age, gender, major, and field of study effect the use of the four constructs (technology, pedagogy, content and knowledge) of the instrument.

Indeed, all the above research are closely interrelated and gradually reveal the full-scale TPACK framework. For instance, Dudley-Evens & St. John's Needs Analysis belongs to the PCK domain, while Jarvis's research on ESP teachers' 10 competencies involves PK, CK and PCK, while Moser and Ivy, Baser, Kopcha & Ozden and Piotrowski's research covers the complete TPACK Framework. There can be found a trend from qualitative research to the mixed methods.

1.4 Research Gap

Although there is an increasing number of quantitative TPACK assessments being developed, there are only a couple of preliminary TPACK instruments relating to English language teaching. However, these TPACK-EFL tools do not seem to help ESP teachers much.

As for the ESP teachers' competency research, which is indirectly related to ESP teachers' TPACK,

most of the previous research is linguistic-based, dividing competencies according to the traditional four skills (listening, speaking, reading and writing). Moreover, few efforts have been made on the quantitative assessment of ESP teacher competence. More often than not, most of the previous studies are about one specific discipline of ESP teaching which violates the author's belief that ESP teacher competencies should be cross-discipline. Last but not the least, previous studies are used to describe the quality of TPACK instruments instead of providing a clear description of the instrument(s) itself which has been pointed out by Voogt et al (2013). This paper aims to develop a prototype framework for ESP-specific TPACK in tertiary education in China, adopting quantitative as well as qualitative assessment.

2. Research Design for the TPACK-ESP Framework

2.1 Research Methods

This TPACK Framework study consisted of three phases—development, validation and implementation. Mixed methods, including literature review, structured interview and questionnaire survey were adopted (see Figures B, C and D). The whole process of the research was based on Sethi and King's (1994) eight-step procedures for developing desirably validated measures. First, a sample of items was generated based on a literature review and the analysis of different ESP programs which composed the first draft of the framework; Second, two native English-speaking ESP consultants who had been involved in the research from the very beginning were invited to do content validity of the first draft of the framework for two rounds (the first round was face-to-face, the second round was through email), after which the second draft of the framework was generated; Thirdly, to purify data, structured interviews of eight ESP experts were carried out as the pilot test of the second draft of the framework until the last two respondents did not recommend any significant changes, which then generated the third draft of the framework; Fourthly, to collect new data, 300 surveys for ESP teachers' understanding of the importance of TPACK items were carried out based on the third draft of the framework, which then generated the fourth draft of the framework; finally, the validated TPACK Framework was applied in another 300 questionnaire surveys to study the current situation of the ESP teachers' TPACK competencies.

2.2 Subjects

For the development phase of the TPACK Framework, firstly, two ESP consultants from Macao Polytechnic Institute (MPI) were involved for face validity of the first draft of TPACK Framework. They had 15 years of ESP teaching experience in China and abroad, and they fully understood the purpose of this research. Each ESP consultant was provided with a form where they provided suggestions to improve each item to ensure clarity and accuracy of the structure and the content of items. Secondly, a purposive “expert sampling” design was adopted for the face-to-face structured interview for the second draft of the proposed TPACK Framework (30 items). A total of eight ESP experts with 10+ years ESP teaching experience were involved in the interview.

Among the eight ESP experts, half of them were non-Chinese nationals; seven out of eight were from universities of various types (leading universities, university at provincial level, Sino-foreign institution and foreign university), one from vocational and technical college. All eight experts had high professional titles (professor or associate professor); five of them were male. Six out of the eight held a PhD degree.

For the validation phase, all the participants were required to have at least 3 years of ESP teaching experience and have a basic understanding of ESP. They were asked to correctly answer three true or false questions prior to taking the survey study. The rationale was that only those ESP teachers with proper experience and knowledge of ESP were able to give feedback on what competencies were needed for ESP teaching. For the implementation phase, all the participants were required to be ESP teachers.

2.3 Instrument Design

At the development phase, the first draft of the TPACK Framework was generated through literature review and ESP programs analysis both in China and abroad. Next, the two ESP consultants were interviewed to help refine the clarity, accuracy and conciseness of the TPACK items through face-to-face interviews for the first round and e-mail for the second round. Each item was reviewed to ensure the precise wording.

Then, after face-to-face and/or email explanations on the purpose of the interview, the eight ESP experts agreed to be interviewed by replying to the invitation letter. The interviews took place in

interviewees' office or other places on campuses. Each structured interview was approximately 30 minutes long depending on interviewees' experience and interests. All interview audio was transcribed using Audacity software (audacity.sourceforge.net) to play back the interview when it was necessary. The questionnaire was generated based on the second version of the TPACK Framework, which comprised three parts: the first part was the demographic information which included years of ESP teaching, academic rank, overseas experience; the second part was to rate the understanding of TPACK on a five level Likert scale (5=most important, 1=least important); and the third part was an open question for suggestions for the proposed TAPCK Framework.

At the validation phase, the questionnaire was based on the third version of the TPACK Framework which was composed of three parts—the demographic information similar to the structured interview, true or false questions about the basic concept of ESP and 22 TPACK items generated after the structured interview (see Appendix D for more information).

At the implementation phase, the questionnaire was based on the norm of the TPACK Framework with two parts—the demographic information and 21 validated TPACK items in the form of a five level Likert scale.

2.4 Data Analysis

The survey results were analyzed using SPSS statistical analysis software 22.0. For factor analysis, KMO and Bartlett tests as well as Principle Components Analysis were applied. To make the factor loading matrix coefficients more significant, the initial factor loading matrix could be rotated, so that the relationship between the factors and original variables could be reassigned, making it easier to interpret.

3. Findings and Discussion

3.1 Findings and Discussion of the Development Phase Survey

3.1.1 Two ESP Consultants' Face Validity

After the face validity, some double-barreled items were split into two single-idea statements or the item be eliminated. For example, some items were similar or complementary in meaning, thus, these items were combined into a new one. For example, the item “Be able to interpret and make informed

judgments as users of information and media” and the item “Be able to interactively identify, locate, access, evaluate and organize knowledge and information sources” were combined into “Be able to interactively identify, locate, access, evaluate and organize knowledge and information sources as users of information and media”. Upon completion of the face validity study by the two consultants, 30 items for TPACK Framework were generated.

3.1.2 The Structured Interview

During the structured interview, the respondents found some of the items were similar or complementary in meaning, thus, these items were combined into a new one. For example, the item “Be able to interpret and make informed judgments as users of information and media” and the item “Be able to interactively identify, locate, access, evaluate and organize knowledge and information sources” were combined into “Be able to interactively identify, locate, access, evaluate and organize knowledge and information sources as users of information and media”. For another example, all the items which belonged to ESP course design were combined into one.

Meanwhile, some of the items overlapped in meaning, thus, these items were combined into one. For example, “foreign persons” in the item “Be able to cooperate with foreign persons distantly” belonged to “different stakeholders” in “Be able to cooperate with different stakeholders distantly”.

Some items were vague in meaning, thus, they were reworded and separated. For example, the item “Be aware of new ways in which teachers can use technology to enhance teaching” was too narrow and vague in meaning, thus, it was refined into “Be knowledgeable about new technology, tools and resources to overcome technical problems and learn new skills”.

Furthermore, some items were over-generalized in meaning, which could be applied to all EFL or ESL teachers, thus, they were removed. For example, the item “Be able to use computer peripherals”, “Be able to design a learning environment”, “Be able to support out-of-class learning”, “Be able to support language development”, “Be able to use collaboration tools for language learning”, and “Be able to manage technology integrated classroom” were removed.

In contrast, some items focused only on a very narrow and specific field of ESP teaching and they were also deleted, for instance, “Be able to prepare ESP curricular activities” and “Be able to adapt a lesson plan”. And, some items were biased or too detailed in wording, thus they were revised. For

instance, “Be able to apply general language learning theories and different language learning approaches in ESP teaching” omitted the concept of “knowledge”, so it was replenished into “Be familiar with and able to apply general language learning theories and approaches in ESP teaching”.

Finally, some items were too colloquial to stand the test of time, and they were eliminated. For example, the item “Be able to use Web 2.0 to develop learners’ language”.

Pilot testing was complete when the last two respondents did not recommend any significant changes. Finally, after all the 8 respondents reached more or less a consensus, the third version of the ESP Teacher’s TPACK Framework (22 items) was generated (see Appendix C).

3.2 Findings and Discussion of the Validation Phase Surveys

3.2.1 Participants

Altogether 300 surveys were sent out through E-mail, QQ and WeChat. Ultimately, 60 respondents declined to participate in the study. Excluding these, a total of 240 replies were received (80% response rate) out of which 115 responses were unusable either because they were not completed or because the participants had less than three years of ESP teaching. Thus, the effective response rate was 52.08% (125 responses). As Anderson (2010) pointed out, an appropriate sample size for factor analysis is five times the number of items in the survey. Thus, 110 participants were recommended for a 22-item survey. Therefore, the number of the valid 125 participants fit the general recommendation for factor analysis. The results of the analysis were presented below.

3.2.2 Demographics

Among the 125 participants, all of them were EPS teachers with at least three years of ESP teaching experience. Most of them were from East China, followed by South China (21.6%). The majority of the participants were experienced EFL teachers around 30-39 years old (50.40%). Most of the participants had middle level (55.2%) and high level (38.4%) academic rank with Master’s Degree accounting for 72.80%.

3.2.3 Results

The Kaiser–Meyer–Olkin measure of sampling adequacy (.920) and approximate chi-square value of

Bartlett's test of sphericity was large (2084.761) and the significant Bartlett's test of sphericity $p < .001$ (Sig.=0.000) indicated that the sample was appropriate for exploratory factor analysis. Given the nature of the TPACK constructs, the correlations among factors were strong; the maximum variance rotation after rotation method was selected. The cumulative contribution rate was 79.846%, indicating that the seven principle components explain the largest percent of the 22 indicators. The seven-factor solution met multiple criteria such that each factor contained a minimum of two items, exhibited sufficient internal consistency, and was interpretable and basically consistent with our initial conceptualization of ESP teachers' TPACK model. Items were retained if they loaded .40 or higher on only one factor and if cross loadings were less than .25 (see Table A in appendices). As can be seen from table A, all the seven factors were labeled in accordance with the TPACK framework.

The first factor F1 had a comparably larger load ($>.07$) on the first 14, 15, 21, 22 variables, these factors reflected knowledge of how technology and content influence and constraint each other from a different side. Thus, F1 was named TCK. However, variables 21 and 22, written as TPACK, were instead loaded onto the factor TCK.

The second factor F2 had a comparably larger load ($>.07$) on the variables 6, 7, 8. These variables reflected knowledge of methods and practices in teaching and learning as well as purposes, values and aims from a different perspective. Thus, F1 was named PK. These factor variables were consistent with conceptualized TPACK Framework's PK factor.

The third factor F3 had a comparably larger load ($>.05$) on the variables 1, 2, 3. These variables reflected ways of thinking about and working with technology, tools and resources from a different perspective. Thus, F1 was named TK. These factor variables were consistent with conceptualized TPACK Framework's TK factor.

The fourth factor F4 had a comparably larger load ($>.04$) on the variables 9, 11, 12, 13. These variables reflected how elements of the content could be arranged by specific teaching approaches for better teaching from a different perspective. Thus, F4 was named PCK.

The fifth factor F5 had a comparably larger load ($>.07$) on the variables 4 and 5. These variables reflected knowledge about the actual subject matter that was to be learned or taught including the

nature of knowledge and inquiry from a different perspective. Thus, F1 was named CK. These factor variables were consistent with conceptualized TPACK Framework's CK factor.

The sixth factor F6 had a comparably larger load ($>.04$) on the variables 17, 18 and 19. These variables reflected knowledge of how to use technology and its affordances and constraints to influence teaching and learning from a different perspective. Thus, F6 was named TPK. These factor variables were consistent with conceptualized TPACK Framework's TPK factor.

The seventh factor F7 had a comparably larger load ($>.07$) on the variable 16. This variable reflected using technology to facilitate teaching content within complex context, involving learners, teachers, content, practices and technologies. Thus, F7 was named TPACK. Variables 10 and 20 had very low loading.

3.2.4 Discussion

From the above result of the factor analysis, it was found that items 21 and 22, regarded as TPACK variables in the third draft, were loaded on factor TCK, while item 16, which used to be regarded as TCK variables, was loaded on factor TPACK. The most likely reason was the difficulty in distinguishing the constructs of TPACK, especially TCK and TPACK. This issue was also reported in Baser, Kopcha and Ozden's (2015) research. However, for the distinction between TPACK and TCK, the differences could be drawn from Mishra & Koehler (2006) and Archambault & Crippen's (2009) definition that: 1) TPACK included an understanding of the complexity of relationships between learners, teachers, content, practices and technologies (Archambault & Crippen, 2009); 2) TCK emphasized the understanding of the constraints and advantages of using technology to represent content (Koehler & Mishra, 2006) which focused on using technology for presenting specific content (TCK) while TPACK focused on the use of technology for teaching that content (Baser, Kopcha & Ozden, 2015). Thus, the definition of TPACK could be refined as "using technology to facilitate teaching content within complex context, involving learners, teachers, content, practices and technologies." The refined definition for TCK was "understanding and applying the constraints and advantages of technology for presenting specific content". In this way, the variables 21 and 22 were reasonably being loaded on factor TCK, and variable 16 was loaded on factor TPACK.

As for the low loaded variable 10 "be able to integrate subject content, implicit knowledge and

language knowledge”, it could be explained that the meaning was abstract and vague, so variable 10 was thus excluded. As for variable 20 “be familiar with and able to manage an ESP project”, the researchers had approved the importance of this variable through literature review. Due to the immaturity of ESP development in China, the researchers believed that the foreign ESP programs experiences should be retained. Appendix E presented the final version of the TPACK Framework.

The study developed a prototype of TPACK Framework for ESP teachers in China in a perspective opposite to most of the previous studies that ESP teacher competencies should be instrumental-based rather than linguistic-based. Because ESP was language learnt for non-linguistic goals, and it focused on learners’ communication ability to help achieving “real world” objectives. It applied quantitative assessment of ESP teacher competences which compensate for the qualitative assessment of the previous studies. Most distinguished, it believed ESP teachers’ competencies should be cross-discipline rather than mono-discipline. Thus, the research generalized the common TPACK competencies of ESP teachers. Last but not the least, it exposed a clear and detailed description of how the TPACK instrument(s) was developed rather than only describing the quality of it.

3.3 Findings and Discussion of the Implementation Phase Survey

3.3.1 Participants

Altogether 300 sureys were sent out through E-mail, QQ and WeChat. Ultimately, 60 respondents declined to participate in the study. Excluding these, a total of 243 replies were received (81% response rate) out of which 114 responses were unusable either because they were not completed or because the participants were not ESP teachers. Thus, the effective response rate was 53% (129 responses).

3.3.2 Demographics

Among the 129 participants, all of them were EPS teachers, and most of them were from East China (41.9%), followed by South China (23.3%). The majority of the participants were experienced EFL teachers around 30-39 years old (50.4%). However, 52% of them had less than 3 years of ESP teaching experience. Most of the participants had middle level (53.3%) and high level (41.1%) academic ranks with Master’s Degree accounting for 72%.

3.3.3 Results

Participants were asked to respond to the 5-Likert Scale statements dealing with their current situation of TPACK (5=excellent; 1=very poor). The questionnaire had very high reliability in terms of factor with initiation 0.961. Table B (see appendices) illustrates the distribution of mean scores on the ESP teachers' TPACK.

The data in Table B reveals that most of the mean scores were higher than 3.00, indicating that these teachers were generally satisfied with their TPACK. They felt confident in their PCK, with the greatest perceived strength in “classroom management”. They also reported having strong PK, with “using ESP pedagogical strategies” slightly above average. Notably, among these scales, they rated lower scores on some variables in TPACK (Mean = 2.96, SD = 1.107), TCK (Mean = 3.13, SD = 0.987), and TPK (Mean = 3.22, SD = 0.929). That is, relatively, the participants possessed less self-confidence in knowledge regarding TPACK, especially weak in “using digital concordance and corpora to carry out ESP genre analysis and discourse analysis”. They believed that their TPK needed improvement, with “using technology to meet ESP learners' individual needs” coming first. As for their TCK, they provided positive response to two variables, while they felt uncertain about “cooperating with different stakeholders distantly”. The survey results also indicated that the participants agreed that their TK and CK were slightly above average, and they showed confident towards “troubleshooting basic technology, tools and resources”, but had some difficulty with “foundational knowledge in the subject-area”.

3.3.4 Discussion

The implementation phase of the ESP-TPACK framework investigated the current state of ESP teachers' TPACK development in order to unfold the participants' self-confidence in integrating technology with ESP subject matter. According to the descriptive results of this study, ESP teachers were satisfied with their TPACK in general. In spite of that, their confidence in combining TK with PK and CK in their classroom teaching was relatively low when compared with other factors of TPACK. This was because on the one hand, they felt weak in “foundational knowledge in the subject-area”, on the other hand, their teaching experience may be negatively linked to their perceived competence of knowledge with regard to TK, TPK, TCK, and TPACK (Roig-Vila et al., 2015). They had to navigate between these interrelated sections as an expert who could easily cross the borders of

subject matter, pedagogy, and technology (Baran et al., 2011; Mishra & Koehler, 2006). As pointed out by scholars such as Öz (2015), mere TPACK development did not necessarily guarantee the application of the competencies in classroom teaching.

The participants indicated an extreme deficiency in using digital concordances and corpora to carry out ESP genre analysis and discourse analysis. Since a well-formulated theory of how language works in human interaction has become an urgent necessity in the field of teaching languages for specific purpose, Genre pedagogies are a major response to this need. But, teachers themselves should be equipped with a way of identifying what the features and practices are of target groups, or the frameworks for the study of specialized communication in academic, professional and institutional contexts, which need specialized training.

It was found that a majority of the participants reported strong in PK such as “classroom management” and “using ESP pedagogical strategies” which could be explained by the research made by Jiang & Chang (2016) and Jang & Tsai (2012) that experienced teachers tended to be more confident compared with novice teachers regarding knowledge of subject content (CK) and instructional strategies (PK). In other words, teachers with more language teaching experience were generally inclined to have more confidence in their knowledge regarding CK, PK, and PCK (Jiang & Chang, 2016; Jang & Tsai, 2012).

The results of this study may suggest that ESP teaching experience played an important role in ESP teachers’ perceived TPACK. In line with past studies (Jiang & Chang, 2016; Jang & Tsai, 2012), this study found that the teachers with more ESP teaching experience were generally inclined to have more confidence in their knowledge regarding the instructional strategies PK.

4. Conclusion

Based on the theory of TPACK, this study surveyed the ESP teachers’ self-confidence in technology-enhanced instruction of English in China. The ESP-TPACK framework administered by this study was confirmed in terms of its reliability and validity. It is among the first developed and validated competency framework for ESP teachers in China. This instrument could therefore be utilized for the investigation of ESP teachers’ perceived TPACK in the future. Through the three-phase research design, with the use of mixed methods, it is concluded that 21 variables in the proposed ESP teachers’ TPACK Framework are valid and significant (see Appendix E). The results of this study suggest that

conducting a qualitative TPACK for ESP teachers is difficult to predict in a practical sense due to the challenges in clarifying the boundaries of TCK and TPACK. Meanwhile, the survey on the current situation of ESP teachers' TPACK indicates that more emphasis should be placed on preparing ESP teachers' ability to use digital concordance and corpora, manage ESP projects, cooperate with different stakeholders, meet individual needs based on their ICT literacy and strengthen their knowledge in the subject-areas.

The findings and implications of the present study not only highlight the challenging mission and responsibility of ESP teacher education programs in training quality teachers, but also expected to provide insights for administrators or educators to implement ESP teacher education. At present, the ESP-TPACK Framework has been applied in guiding the pre- and in-service preparation of ESP teacher in Wenzhou University since 2016. The instruments can also be used in a number of other ways, for example, to determine if ESP teacher preparation programs are effective in cultivating the kind of knowledge required by universities and professional institutions; to provide baseline data of ESP teachers to be used by administrators who desire to improve ESP teaching in their institutions; to assess ESP teachers' knowledge competency, and to inform curricula development in ESP teacher preparation programs.

5. Implication

Based on the previous EFL related TPACK researches, this study fills the gap in ESP specific TPACK content research in tertiary education in China. The results of the study indicate that the use of an instrument development model like Sethi and King's (1994) eight-step procedure might be a good way to develop a future field-specific ESP-TPACK survey. Moreover, some proposals are offered for ESP teacher preparation programs in the future. Firstly, programs regarding technology use for educational purposes (e.g. the applications of web technology) can be considered. Meanwhile, if conditions permit, the introduction of the emerging technology such as virtual reality (VR) could be designed as an advanced program for ESP teachers to enrich their teaching strategies. Secondly, in consideration of the fact that teaching experience plays an important role in ESP teachers' TPACK, it is suggested that workshops be organized for in-service and pre-service teachers to exchange experiences regarding CK, PK, and PCK.

Future investigations should examine the ways to implement the ESP-TPACK framework in ESP

classrooms to help ESP teachers build up experience in integrating technologies effectively. In addition to the self-reported surveys, other forms of assessing ESP teachers' TPACK competence are also worthy of study, such as classroom observation, case study and so forth. To go a step further, the effectiveness of the ESP-TPACK implementation activities might also be investigated (Pamuk et al., 2015). Future research also could apply the framework into the continued expansion of ESP areas, such as ESP for Arts, ESP for Business etc., to respond to the current interest in developing content-specific surveys that support the idea that each content area values its own pedagogical and technological practices (Baser et al., 2015).

More research is needed in this wild land to enrich and validate this prototypical framework. Translating the survey into other languages would help rapidly to assess ESP teachers' TPACK in a valid and reliable manner worldwide.

6. Limitation

The research is exploratory by nature; although great attention has been paid to the issues of validity and reliability of the TPACK Framework, some limitations still exist:

Firstly, the ESP teacher samples are small in the study and the other stakeholders such as subject area experts and ESP learners are not involved due to the difficulties in accessing the appropriate participants, the vague concept of ESP and the tight schedule of the whole research. Anyhow, it can be compensated somewhat by the diversity in sample distribution and the diversified ways of sampling. The scope of the study is limited by the target group characteristics. Therefore, interviews with the teachers can provide more reliable data and their competency can be measured more accurately. Convenience sample as opposed to random selection protocol is used in the research which may affect the findings in the way that the participants are more positively inclined toward TPACK.

Secondly, the use of exploratory factor analysis (EFA) to validate the TPACK Framework gets promising results, however, confirmative factor analysis (CFA) will compensate for the additional evidence of the validity of the TPACK Framework.

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Appendices

Appendix tables:

Table A: Rotated factor loading matrix

	Components						
	1	2	3	4	5	6	7
1.Zscore (media informati	-.004	.218	.659	.015	.098	.260	.535
2.Zscore(information technology)	.200	.256	.764	.286	.216	.018	-.005
3.Zscore(overcome techn difficulties)	.253	.458	.594	.159	.091	.329	-.115
4.Zscore(Basic knowledge ESP)	.233	.146	.214	.007	.884	.043	.094
5.Zscore(Basics ESP rel disciplines)	.153	.165	.046	.392	.780	.235	.125
6.Zscore(ESP teac strategies)	.265	.725	.032	.303	.226	.101	.134
7.Zscore(Clear understand of ESP Teachers' Role)	.224	.766	.254	.002	.212	.096	.259
8.Zscore(Clear ESP teac purposes , values and goals	.274	.728	.206	.231	.055	.258	-.016
9.Zscore(Language teac theories and methods)	.277	.249	.174	.761	.186	.078	.161
10.Zscore(Integration knowledge)	.294	.570	.275	.061	-.014	.214	.413
11.Zscore(Classroom management)	.261	.590	.363	.457	.075	.002	.153
12.Zscore(ESPcontext knowledge)	.273	.512	.335	.423	.136	.291	.065
13.Zscore(ESP lear assessment)	.139	.403	.263	.495	.205	.373	.103
14.Zscore(remote cor various stakeholders)	.834	.079	-.004	-.022	.174	.133	.149

15.Zscore(use multim express ideas)	.735	.242	-.003	.161	.214	.181	.109
16.Zscore(use corpus to course analysis)	.334	.190	-.030	.220	.196	.149	.790
17.Zscore(use ICT to reā instructional design)	.557	.253	.271	.203	.058	.491	.200
18.Zscore(use ICT to sat learners' needs)	.546	.214	.284	.159	.135	.482	.355
19.Zscore(guide learners' ethics)	.350	.236	.113	.092	.202	.762	.194
20.Zscore(familiar with program)	.552	.435	.255	.250	.111	.257	.119
21.Zscore(use ICT to facil learning)	.804	.277	.235	.210	.051	.082	.081
22.Zscore(use ICT to de ESP teaching material)	.764	.340	.210	.272	.108	.119	.059

Extraction method: Principal Component

Rotation method: a Kaiser standardized orthogonal rotation method.

a. Rotation after 11 iterations to converge.

Table B: Descriptive statistics for the current situation of the ESP teachers' TPACK

		Deviation					
	N	Minimum	Maximum	Total	Mean	Std.	Variance
X1	129	1	5	437	3.39	.921	.849
X2	129	1	5	441	3.42	.924	.855
X3	129	1	5	460	3.57	.942	.888
X4	129	1	5	447	3.47	1.068	1.141
X5	129	1	5	423	3.28	1.068	1.140
X6	129	1	5	439	3.40	.931	.867
X7	129	1	5	456	3.53	1.061	1.126
X8	129	1	5	455	3.53	.944	.892
X9	129	1	5	483	3.74	.850	.723
X10	129	1	5	450	3.49	.920	.846
X11	129	1	5	431	3.34	.940	.883
X12	129	1	5	448	3.47	.928	.861
X13	129	1	5	404	3.13	.987	.975
X14	129	1	5	462	3.58	.872	.761
X15	129	1	5	442	3.43	.925	.856
X16	129	1	5	425	3.29	.980	.959
X17	129	1	5	429	3.33	1.009	1.018
X18	129	1	5	416	3.22	.929	.863
X19	129	1	5	437	3.39	1.002	1.005
X20	129	1	5	416	3.22	1.040	1.082
X21	129	1	5	382	2.96	1.107	1.225
Valid N (listwise)	129						

Appendix C: TPACK Framework (22 items) after structured interview

Type	No.	Evaluation indicator
TK	1	Be able to interactively identify, locate, access, evaluate and organize knowledge and information sources as users of information and media
	2	Be knowledgeable about basic technology, tools and resources
	3	Be able to troubleshoot basic technical problems and learn new skills
CK	4	Be knowledgeable about ESP: understand the origin, definition and development of ESP teaching and learning
	5	Be cognizant of foundational knowledge in the subject-area: basic concept discipline culture, ideas, beliefs and practices that construct the typical speech acts and genres
	6	Be able to use ESP pedagogical strategies
PK	7	Be able to understand the roles of an ESP teacher and be able to change from an EGP teacher to an ESP teacher
	8	Be clear about the purposes, values and aims of ESP teaching as well as be able to apply new teaching methods, strategies & tools in ESP teaching (content-based instruction, corpus-assisted instruction)
	9	Be familiar with general language learning theories and approaches, such as target professional discourse knowledge, ESP learning experience, target language cultural awareness, linguistic research and language analysis experience
	10	Be able to integrate subject content, implicit knowledge and language knowledge
	11	Be adept at classroom management: set expectations for a variety of tasks, create a vibrant class environment and provide appropriate feedback
	12	Be clear about contextual knowledge (learner knowledge gained through Needs Analysis, institutional and disciplinary knowledge, the demands of working fields and social environment)
	13	Be able to assess ESP learning
TCK	14	Be able to cooperate with different stakeholders distantly
	15	Be benefit from multimedia to express ideas
	16	Be able to understand and carry out ESP genre analysis, discourse analysis linguistic analysis, and register analysis, using digital concordances and corpora
TPK	17	Be able to use technology to carry out course design and teaching strategies
	18	Be able to use technology to meet ESP learners' individualized needs
	19	Be able to guide learners for ethical technology usage
TPACK	20	Be familiar with and able to manage an ESP project: set and refine goals, manage resources, monitor progress and make adjustments
	21	Be able to use multimedia to support language learning
	22	Be able to use technology to design ESP learning materials

Appendix D

ESP teachers' understanding of TPACK (in general situation)

高校 ESP 教师 TPACK 知识结构调查问卷

尊敬的老师:

您好!

《大学英语教学指南》指出我国大学英语将由“通用英语、专门用途英语和跨文化交际”三大类课程构成。目前许多高校已经或正准备开展 ESP 专门用途英语的教学。而合格的 ESP 教师是顺利开展 ESP 教学改革的关键。为促进教师发展, 研究小组针对高校 ESP 教师整合技术的学科教学知识(TPACK)在理论层面的重要性进行问卷调研。您的回答无对错之分, 所得资料仅作为我们研究分析的重要依据。对您的支持, 我们表示诚挚的感谢!

填写说明: 请您在所选答案的“□”打上“√”

本调查包括 15 个问题。

一、教师背景信息

1. 您是否为 ESP 教师

请只选择下面的一项:

是

否

2. 年龄:

请只选择下面的一项:

20-29

30-39

40-49

>49 岁

3. 教龄:

请只选择下面的一项:

< 3 年

3-5 年

6-10 年

11-15 年

16-20 年

>20 年

4. ESP 教龄:

请只选择下面的一项:

< 3 年

3-5 年

6-10 年

11-15 年

16-20 年

>21 年

5. 职称:

请只选择下面的一项:

- 未定级
- 初级
- 中级
- 高级

6.最高学历:

请只选择下面的一项:

- 本科
- 硕士
- 博士

7. 出国进修:

请只选择下面的一项:

- 否
- 是, 进修国家: _____

8.您任职的学校位于:

请只选择下面的一项:

- 华北地区
- 华东地区
- 华中地区
- 华南地区
- 西南地区
- 西北地区
- 东北地区

二、您对 ESP 教师 TPACK 知识结构的理论重要性认知

ESP 教师应该具备.....

*TK	1-非常不重要, 5-非常重要 1 2 3 4 5
1.交互地识别、定位、获取、评价和组织媒体 息资源	
2.现代化的信息技术、工具和资源	
3.克服技术困难, 学习新技能	
*CK	1-非常不重要, 5-非常重要 1 2 3 4 5
4.基本的ESP 认知, 包括ESP 起源、定义及发 展	
5.ESP 相关学科的基础知识, 包括学科基本概 念、学科文化、思维、研究范式及话语传统和 规约	
*PK	1-非常不重要, 5-非常重要 1 2 3 4 5
6.使用ESP 教学策略	
7.清晰地认识ESP 教师角色	
8.明确ESP 教学目的、价值和目标, 并能在教	

学中运用新的教学方法和工具，如基于内容的教学及语料库辅助教学等					
*PCK		1-非常不重要，5-非常重要			
		1	2	3	4 5
9.语言教学方法和经验，包括教师自身的 ESP 学习经验、目标语言文化意识、语言学研究和语言分析经验					
10.整合学科内容知识、隐性知识和语言知识					
11.掌控 ESP 课堂管理，包括设定各项任务的目标、创造良好的课堂环境、提供恰当的反馈					
12.ESP 语境知识，包括通过需求分析获得的学习者知识、机构及学科知识、工作领域的要求和社会环境知识					
13.ESP 学习评价					
*TCK		1-非常不重要，5-非常重要			
		1	2	3	4 5
14.使用远程技术与各利益相关者合作					
15.运用多媒体表达观点					
16.使用语料库进行ESP 语类分析、语篇分析语言学分析及语域分析					
*TPK		1-非常不重要，5-非常重要			
		1	2	3	4 5
17.使用技术实践教学设计和教学策略					
18.使用技术满足ESP 学习者的不同需求					
19.引导学生使用技术的伦理道德					
*TPACK		1-非常不重要，5-非常重要			
		1	2	3	4 5
20.了解并实践ESP 项目操作，包括设定和调目标、管理资源、监控进程和实施评价					
21.使用现代化技术发展学习者语言					
22.使用技术设计ESP 教学资料					

衷心感谢您的合作！

Appendix E: The final version of the ESP Teacher Competency Framework

Type	No.	Evaluation indicator
TK	1	Be able to interactively identify, locate, access, evaluate and organize knowledge and information sources as users of information and media
	2	Be knowledgeable about basic technology, tools and resources
	3	Be able to troubleshoot basic technical problems and learn new skills
CK	4	Be knowledgeable about ESP: understand the origin, definition and development of ESP teaching and learning
	5	Be cognizant of foundational knowledge in the subject-area: basic concepts discipline culture, ideas, beliefs and practices that construct the typical speech acts and genres
	6	Be able to use ESP pedagogical strategies
PK	7	Be able to understand the roles of an ESP teacher and be able to change from an EGP teacher to an ESP teacher
	8	Be clear about the purposes, values and aims of ESP teaching as well as be able to apply new teaching methods, strategies & tools in ESP teaching (content-based instruction, corpus-assisted instruction)
	9	Be adept at classroom management: set expectations for a variety of tasks, create a vibrant class environment and provide appropriate feedback
K	10	Be clear about contextual knowledge (learner knowledge gained through Needs Analysis, institutional and disciplinary knowledge, the demands of working fields and social environment)
	11	Be able to assess ESP learning
	12	Be familiar with general language learning approaches and experiences, such as ESP learning experience, target language cultural awareness, linguistic research and language analysis experience
TCK	13	Be able to cooperate with different stakeholders distantly
	14	Be benefit from multimedia to express ideas
	15	Be able to use multimedia to support language learning
TPK	16	Be able to use technology to design ESP learning materials
	17	Be able to use technology to carry out course design and teaching strategies
	18	Be able to use technology to meet ESP learners' individualized needs
TPACK	19	Be able to guide learners for ethical technology usage
	20	Be familiar with and able to manage an ESP project: set and refine goals, manage resources, monitor progress and make adjustments
	21	Be able to understand and carry out ESP genre analysis, discourse analysis, linguistic analysis, and register analysis, using digital concordances and corpora



Comparing the Use of Different Prewriting Strategies on Medical Students’ L2 Writing

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Abstract

This study investigates the impact of using different prewriting strategies on Iranian EFL medical students’ L2 writing. We applied a sequential mixed method approach in which the initial quantitative phase of study was followed by a qualitative stage. The subjects of the study were 84 Iranian EFL medical students who took part in an English academic writing course. We found that using prewriting strategies had a positive effect on Iranian EFL medical students’ L2 writing. Moreover, the comparison between different types of prewriting indicates that listing was the best

prewriting strategy while mapping and free writing took the second and third place, respectively. Using L2 for prewriting activities had a positive significant effect on students' writing. Most students had a positive perception towards using prewriting strategies while no significant difference was found between male and female students' writing in terms of applying different types of prewriting strategies. This study confirmed the use of prewriting strategies to improve students' writing. The results may open new doors to material designers, instructors, researchers, ESP writing experts, and curriculum designers to improve students' writing.

Keywords: EFL Students, ESP, Gender, Prewriting, Perception, Writing

Introduction

The ability to write in English seems essential for students all over the world (Reichelt, 2005; Dipolog-Ubanan, 2016). Students particularly those who are studying in higher education need to improve their writing skill for various reasons such as completing their studies, passing their proficiency exams, or pursuing successful careers in their future. In spite of the importance of writing, it is one of the most difficult skills for L2 learners to master (Richards, 2002; Bakar, Awal, & Jalaluddin, 2011; Jafarian, Soori, & Kafipour, 2012; Zangoei & Davoudi, 2016). In a word, writing is not an easy process and learning to write has been viewed as a difficult task for learners in educational settings (Talebinezhad & Negari, 2009).

Some researchers referred to writing as the most complex and difficult language skill containing an "integrated set of processes that are interactive and recursive" (e.g., Alodwan & Ibnian, 2014, p.140). In this regard, the most overlooked stage is the prewriting which has been considered as the most significant skill to emphasize and practice extensively (e.g., Mahnam & Nejadansari, 2012). Mogahed (2013) argued that prewriting is a main problem for many students, especially young writers. He believed that prewriting is a crucial stage in the writing process that has been frequently overlooked by students.

Although some studies identified the impact of prewriting on students' writing achievement (e.g., Mahnam & Nejadansari, 2012; Weigle, 2014), little attention has been directed toward using different types of prewriting. To fill this gap, this study attempts to determine the impact of using various pre-writing strategies and gender differences on Iranian EFL medical students' L2 writing.

It begins with defining prewriting, different kinds of prewriting, and related studies on prewriting. It presents the method, the results and discussion. Finally, it ends with the conclusions, limitations and implications.

Prewriting

Writing in L2 classrooms always constructs a challenging atmosphere for students (Geyimci, 2014). For many years, it presumed that the writing process generally operated in some variation of three to five stages namely, prewriting, drafting revising, editing (proofreading), and publishing. For example, Flower and Hayes (1980) proposed three stages of writing: “planning what and how to say it; translating plans into written text; and reviewing to improve the text” (p.40). Recently, Hyland (2008) has proposed three main approaches in teaching and research writing. The first one focuses on texts as the writing products. The second one concentrates on the processes of providing texts. The third one deals with the role of readers in writing. According to Hayland (2008), pre-writing activities such as outlining and drafting seem essential in the initial stage of writing. In spite of the significance of the activities contained in the various writing stages, many teachers have paid little or even no attention to pre-writing activities.

A number of definitions of prewriting emerge from the literature. A lot of researchers considered prewriting as the first phase of writing which is typically followed by drafting, revision, editing and publishing (e.g., Lorenz, Green, Brown, 2009). Weigle (2014) defined prewriting as “structured activities to provide motivation, content, fluency, and language which ultimately served to help students find a way into writing about topic” (p.227). Rambo (2014) believed that prewriting is the work we do on our essay before we actually start writing a draft of it. According to Jiwprasat (2012), prewriting refers to the stage before students learn writing. It is the first stage of the writing process followed by drafting, revision, editing and publishing. She mentioned that prewriting is different from planning in that the former is a creative phase, while the latter is a critical phase. In fact, prewriting is the stage to start up writing paragraphs and essays, while planning is the stage in which the writer accepts or rejects ideas.

Some studies have identified different prewriting classifications. For instance, Weigle (2014) divided prewriting strategies into pre-discussions, free writing, drafting, outlining, listing, cubing, questioning, looping and webbing/clustering. According to Jiwprasat (2012), brainstorming and

listing are prewriting terms that can often be used interchangeably. The former is an informal way of generating topics to write about, it creates a stress-free atmosphere that encourages students to write. It can help students use their prior knowledge in their writing activity and recognizing what skills and information they have and what they need to know (Rao, 2007). It is an effective way of getting started or generating new ideas which can be applied as a useful tool in EFL settings to show learners how to generate more ideas to enhance their learning process (Mogahed, 2013). The latter is a process to generate a lot of information in a short period of time by building the information on the association of previous terms (Jiwprasat, 2012).

Novak (2010) referred to concept mapping or mind mapping as a visual representation of an individual's knowledge structure on a particular topic. Mapping is originally derived from Ausubel's assimilation cognitive theory in which an individual's learning depends on his/her previous knowledge. This theory takes learning productive and meaningful when it connects the prior knowledge with new information. A mind mapping can assist learners observe their major categories and subdivisions before they make decisions about how to organize their writing. It not only encourages students to map out their ideas prior to composing but also allows them to translate their ideas and concepts into visual or graphical representations before writing the main text (Jiwprasat, 2012). In addition, mind mapping can be used to activate prior knowledge and scaffold cognitive processing by assisting students to see relations among words, ideas, and categories. Some scholars have advocated the use of scaffolding design or concept mapping in writing. They believed that concept mapping can assist students in undertaking task, focusing on important textures, and organizing materials (e.g. Negari, 2011). Mogahed (2013) stated that concept mapping is a graphic organizer activity that demonstrates the relationships among concepts.

Another prewriting strategy is free writing in which a person writes continuously for a set period of time without checking the spell, grammar, or topic. It aids the writer gets in touch with the big picture without getting lost in details. Darling (2004) noted that many writing instructors use a free writing exercise at the beginning of each class as a way of getting the brain in gear. They ask students not make corrections as they are writing. In contrast, students should keep writing though they do not know what to write exactly.

Due to the importance of the prewriting, a lot of researchers tried to identify the effect of prewriting activities on students' writing (e.g., Lorenz et al., 2009). Some of them argued that prewriting did not affect students' writing (Johnson, Mercado, & Acevedo, 2012) while others demonstrated that prewriting activities improved students' L2 writing. Ellis and Yuan (2004) mentioned that prewriting simplified the writing process among adult ESL. In fact, students' writing may contain greater accuracy, fluency, and syntactical variety if they use pre-task planning such prewriting.

Some empirical studies tried to identify the effect of using prewriting strategy on students' writing. For example, 60 Iranian EFL advanced learners took part in English writing courses. No significant difference was found between students who applied brainstorming as a prewriting activity and those who wrote without prewriting (Hashempour, Rostampour, & Behjat, 2015). In another study, Sundeen (2012) investigated the effects of prewriting strategy on high school students' writing. The results showed that prewriting could improve students' writing. Moreover, the result of interviews revealed that most students were quite satisfied with using prewriting strategies.

In another study, the quality of students' argumentative writing was assessed in a Vietnam University. Sixty six students were trained to apply two types of prewriting strategies: group discussion and free writing, before writing an argument. The results indicate that the students' productivity and writing quality was improved especially when they used free writing (Phuong, Admiraal, Janssen, & Rijlaarsdam, 2018).

According to Zhang and Vukelich (1998) cited by Ibnian (2011), students' gender had strong influence on the effectiveness of prewriting. In their study, females got a higher mean score in their writing than males did.

Likewise, Karim (2010) compared the effectiveness of using L1 and L2 in prewriting discussion on EFL students' writing quality. The participants in the study were 30 Kurdish native speaker students who studied at English language department. After training prewriting strategies, the students were asked to write four essays. In addition, the students' perception towards prewriting was assessed. The findings demonstrated that the participants who used L2 in their prewriting performed better in their essays writing than those who applied L1. Moreover, students claimed that prewriting was an effective strategy in EFL writing classes.

Although some studies identified the impact of prewriting on students' writing achievement (e.g., Karim, 2010; Mahnam & Nejadansari, 2012; Hashempour et al., 2015), little attention has been directed toward applying different types of prewriting strategies. The main objective of this study is to identify the impact of using various pre-writing strategies on Iranian EFL medical students' achievement in L2 writing. The specific research questions (RQs) are as follows:

RQ1. Does applying prewriting strategies significantly affect Iranian EFL medical students' L2 writing?

RQ2. Is there any significant difference in Iranian EFL medical students' L2 writing due to applying different types of prewriting?

RQ3. Does students' gender affect their L2 writing?

RQ4. Does students' prewriting language (L1 or L2) affect their L2 writing achievement?

RQ5. What is the perception of Iranian EFL medical students' towards prewriting?

Methodology

Design of the Study

In this study, a quasi-experimental design was applied to investigate the impact of using various prewriting skills on Iranian EFL medical students' writing achievement. We applied a sequential mixed method approach in which the initial quantitative phase of the study was followed by a qualitative stage. In a quantitative analysis of the study, we investigated the impact of using various prewriting skills on students' academic writing achievement. To this end, different types of prewriting, students' gender, and their language (L1 and L2) were considered as independent variables while students' academic writing scores was considered as a dependent variable. We conducted a qualitative analysis to gain more insight into students' perception of using prewriting.

Framework of the Study

The framework of this study is based on a theoretical framework proposed by Mogahed (2013). In this framework, the prewriting strategy is divided into two parts: invention and arrangement (see Figure 1). The invention stage refers to different types of prewriting activities while the arrangement stage is a graphic design in which a writer tries to explore the new ideas to organize

the prewriting. In this study, brainstorming, free writing, and listing were applied as invention activities. The most common type of arranging activities was short explanations usually put in a circle and connected the circles with lines.

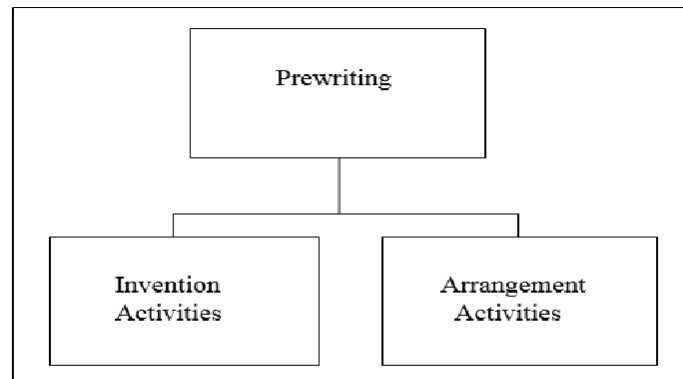


Figure 1. Prewriting framework (Source: Mogahed, 2013, p.64)

Participants

The subjects of the study were 84 Iranian EFL medical students (males and females) who took part in English academic writing as a compulsory three-unit credit course. This study was confined by three intact writing classes held in one semester. Sixty students (28 males and 32 females) in two classes and 24 students (12 males and 12 females) in another class were randomly selected as the experimental and the control group, respectively. All classes were taught by the same teacher who had a PhD in English language and more than five-year experience of teaching academic writing. The classes met twice per week and each session took approximately 75 minutes. Students' native language was Persian.

Procedures

This study was conducted in the first academic year of 2016. It took place in an obligatory academic course which met twice a week and lasted approximately 70 minutes. The course lasted for 17 sessions at the English Language Department of Shiraz University of Medical Sciences. Writing strategies were taught to students during one semester. The same set of lesson plans was used for teaching writing in both control and experimental groups, except prewriting strategies which were only taught to students in the experimental group while no treatment was given to the control group.

In the experimental group, about 15 minutes were allocated to training or practicing prewriting strategies to the students in each session. Due to time constraints, we selected only three main types of prewriting- free writing, listing, and concept mapping- that are very common in academic writing. To do so, the goal of training prewriting strategies was explained completely to the students. Then, the teacher taught them a special type of prewriting strategies and asked them to use it for their following essay writing assignment. Selecting prewriting type was obligatory for each essay; students were asked to use listing, mapping, and free pre writing in W1, W2, and W3, respectively; however, using prewriting language (L1 or L2) was optional (see Appendix 1 for the samples of prewriting). The time interval between writing each essay was two weeks. Data was collected at the end of the semester.

Instruments

To teach students prewriting, the new version of two books entitled “Academic Writing” written by Zemach and Rumisek (2010) and “Paragraph Development” written by Arnaudet and Barrett (1990) were taught. The first book focused on academic writing such as introducing the writing process, the structure of a paragraph, the development of a paragraph, and comparison contrast paragraphs. We also used the second book to teach other aspects of writing such as a paragraph unity, different types of supporting sentences, enumeration, and cause and effect paragraphs. Moreover, we applied other updated materials such as supplementary writing handouts focused on grammar and essay writing for self-study.

In this study, we tried to select parallel prompts of the same degree of difficulty. To select parallel prompts, we considered students’ interest and consulted with several professors who had a lot of experience in teaching writing (see Appendix 2). Roebuck’s Analytic Scoring Rubrics modified by Maftoon and Rabiee cited in Mahnam and Nejadansari (2012) was applied to score students’ writing. As shown in Appendix 3, the checklist included four components in writing. The vocabulary part examined the accuracy and appropriateness of the words. The grammar part examined the sentence structures and comprehensibility. The organization part assessed the information, creativity, coherence, and logics of writing while the mechanics examined the accuracy, legibility, correct spelling, and punctuation. Each component in the rubrics was given a

score between 1 (minimum) to 5 (maximum). Due to having four criteria in the rubrics, an overall score was 20 points.

To score students' writing, two raters (except the researchers) rated students' writing. The correlation coefficient was used to assess the inter-rater reliability between two raters. The results revealed a high inter-rater reliability of %80 between raters. After reaching an agreement on scoring, each rater evaluated students' writing independently.

Interviews

To provide additional evidence on students' views about prewriting, 60 students in the experimental group took part voluntarily in semi-structured interviews. Each interview took approximately 10 to 15 minutes. An interview questions were based on the literature developed by the researchers (See Appendix 4). The questions mainly focused on students' ideas about using prewriting strategies, prewriting languages, and types of prewriting.

Data Analysis and Results

Quantitative analysis

This study tried to investigate the impact of using various prewriting strategies on Iranian EFL medical students' achievement in L2 writing. To investigate if applying prewriting strategies significantly affect Iranian EFL medical students' L2 writing (RQ1), we compared students' total writing scores in the experimental and control groups. The result of independent samples t-test between experimental and control group writing mean scores shows statistically significant effect of prewriting strategies on EFL students' achievement in L2 writing (see Table 1).

Table 1: The Comparison of the Students' Writing Scores in Two Groups

Group	N	Mean	SD	t	Sig.
Experimental	60	69.48	8.58	5.51	.000*
Control	24	60.01	6.44		

* Significant at the 0.05 level ($p < 0.05$)

Moreover, we applied the repeated measurement t-test to compare the results of students' writing focusing on different prewriting strategies used in the experimental group and students' writing in the control group (see Table 2).

Table 2: The Comparison of Students' Writing Considering Prewriting Strategies

Writing	Group	N	Mean	SD	t	Sig
W1	Experimental (Listing)	60	74.60	11.28	8.58	.000
	Control	24	50.83	11.97		
W2	Experimental (Mapping)	60	68.56	12.12	1.46	.15
	Control	24	65.23	8.14		
W3	Experimental(Free writing)	60	65.28	9.60	.509	.61
	Control	24	63.98	12.64		

Note: W1= Listing; W2= Mapping; W3= Free writing

Although the students' performed better in the experimental group, the p value between students' writing in two groups was only significant in W1 (see Table 2). It could be inferred that the students in the experimental group achieved significantly higher mean scores in their first writing in which they applied listing in their prewriting.

Moreover, to investigate if there is any significant difference in Iranian EFL medical students' L2 writing due to applying different types of prewriting (RQ2). First, we applied LSD (Least significant difference) to determine whether prewriting strategies were different from each other in the experimental group (see Table 3). After that, the repeated measurement t-test was applied to compare the difference of prewriting strategies in students' writing in the experimental group (see Table 4).

Table 3: Tests of Within-Subjects Effects

Group	Source	Mean Square	Sig.
Experimental	Sphericity Assumed	1343.66	.000

Table 4: The Comparison of Prewriting Strategies in the Experimental Group

Group	Writing (I)	Writing (J)	Mean difference(I-J)	Sig.
Experimental	Listing Total	Mapping Total	6.05	.000
		Free writing Total	9.33	.000
	Mapping Total	Listing Total	6.05	.000
		Free writing Total	3.28	.05

Table 4 presents a significant difference between listing and mapping, and listing and free writing ($p < 0.0001$). In contrast, the difference between mapping and free writing was marginally significant ($P\text{-value}=0.05$). The result indicated that there was a significant difference between listing and other types of prewriting in the experimental group. In a word, the comparison between different types of prewriting showed that listing was the best prewriting strategy while mapping and free writing took the second and third place, respectively. This comparison is shown in Figure 2.

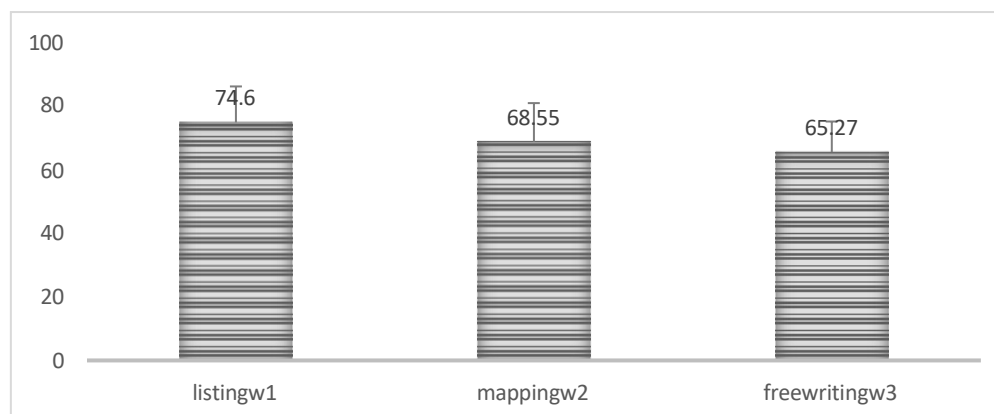


Figure 2. The Comparison of Applying Different Prewriting Strategies in Students' Writing

We also ran the independent sample t-tests to compare the writing mean scores of male and female students to determine if students' gender affects their L2 writing (RQ3). Generally, female students performed better than males in writing; however, no significant difference was found between their mean scores in the experimental and control groups (see Table 5)

Table 5: The Comparison between Males and Females' Writing in Different Groups

Group	Gender	N	Mean	SD	t	Sig (2-tailed)
1	Male	28	68.69	7.94	.67	.51
	Female	32	70.17	9.17		
2	Male	12	61.73	4.34	1.33	.20
	Female	12	58.29	7.84		
1 & 2	Male	40	66.60	7.71	.17	.87
	Female	44	66.93	10.24		

Note: G1=experimental; G2=control

As shown in Table 6, there was not any significant difference between males and females in terms of using different types of prewriting in their writing scores.

Table 6: Comparing Students' Writing Scores Using Different Prewriting Strategies

Prewriting Strategy	Gender	N	Mean	SD	t	Sig. (2-tailed)
Listing	Male	28	73.87	9.98	.47	.64
	Female	32	75.25	12.42		
Mapping	Male	28	67.99	11.72	.34	.74
	Female	32	69.05	12.63		
Free writing	Male	28	64.21	7.25	.81	.42
	Female	32	66.21	11.30		

To investigate if students' prewriting language (L1 or L2) affects their L2 writing achievement (RQ4), we applied a repeated measurement test to compare the mean scores. The results showed that prewriting language could significantly affect students' writing. Since the effect size statistic (Partial Eta Squared) was 1, it could be indicated that English language (L2) would eventually had a positive significant effect on students' writing (see Table 7).

Table 7: The Comparison between Languages Used in the Experimental Group

Tests of Within-Subjects Effects			
Group	Source	Sig.	Partial Eta Squared
Experimental	English(L2)	.000	1.000
	Persian(L1)	.740	.002

As shown in Table 8, using the L2 for prewriting activities in the form of listing, mapping, and free writing had a positive significant effect on students' writing while using L1 as a prewriting did not have any significant effect on students' writing.

Table 8: Comparing Students' Writing Using Different Prewriting

Languages					
Prewriting	Prewriting Language	B	t	Sig	Partial Eta Squared
Listing	Intercept	6.56	.79	.429	.01
	L2	.98	8.40	.000	.55
	L1	.19	1.50	.137	.04
Mapping	Intercept	14.90	1.88	.066	.06
	L2	1.23	10.92	.000	.68
	L1	.03	.22	.824	.001

Qualitative Analysis

In this study, we transcribed, coded, and categorized students' replies in order to analyze the interview data. Referring to the importance of the prewriting, most interviewees (78%) mentioned that using prewriting strategies helped them become better writers. They believed that the more time they spent on prewriting activities, the more successful their writing would be. One of them highlighted that: "the prewriting stage will persuade us to write effectively; it promotes our creativity and personal awareness". Another student said: "prewriting strategies help us improve the quality of our writing. In fact, the benefits of prewriting are not limited to our writing class; we can apply this strategy in any piece of writing such as writing an article or a thesis". Some students (40%) referred to prewriting as a good task, which helped them start writing. One of them said: "I found the prewriting task very useful to get started writing. Previously, I did not know how to generate ideas on the topic. Another student said: "writing became less daunting and more manageable to me after I learned using prewriting strategies". A few students (13%) focused on the cognitive abilities of prewriting strategies. They found prewriting as an excellent exercise to promote their creative thinking. Another student stated: "no matter what type of prewriting we use; as a whole, using prewriting techniques help us not only complete our writing faster but also

receive a higher score”. Another student mentioned: “prewriting techniques help us create and express our ideas logically and coherently”. In contrast, four students (13%) mentioned their dissatisfaction concerning prewriting. One student said, “I think, prewriting strategies did not have any impact on the improvement of my writing because of being time-consuming particularly during writing exam where we should effectively manage our time”.

Regarding the use of different types of prewriting, students had different ideas. Only (7%) of the students highlighted that none of the prewriting types takes priority over another, while most of them (69%) found listing a useful process of generating a lot of information within a short time. One student stated: “comparing prewriting strategies, listing is the easiest way of generation of words, phrases, and ideas”. Another one said: “I think it is useful to make lists of our ideas. Breaking significant ideas into sub-lists is easy because we can jot down words and phrases, and create lists by pulling related ideas.”

Some students (50%) were interested in using concept mapping. They believed that it can help writers organize information and understand sophisticated communication to write the text successfully. Some students (21%) added, “after concept mapping, we need to select only the most prominent and interesting ideas. The least benefit of this strategy is that our topic is narrowed. To this end, several relevant points could be generated about the topic during prewriting”. Two students (7%) argued that in concept mapping, any materials that come to mind can be summarized, categorized, and connected to the original text.

Other students (37%) were interested in using free writing. One of them said, “I like to apply free writing strategy because it does not have a boundary; I can write down everything I could think about the topic”. Another student mentioned that, “nonstop writing permits us to focus on a specific topic; it persuades us to write so quickly without revising it. We do not need to judge our own writing; we just write whatever comes into our mind”. In contrast, two of the students expressed their dissatisfaction about using free writing strategy. They mentioned that it could be waste of time to write non-stop on a general topic for some minutes even though nothing specific comes to their mind. One student stated: “although prewriting permits a writer to focus on a specific topic, it persuades him/her to write so quickly that he/she is not allocated time to edit any ideas”. Another

one said: “the only thing which is important in free writing is generating ideas without focusing on the vocabulary, grammar or spelling”.

Discussion

This study tried to investigate the impact of using various prewriting strategies on Iranian EFL medical students’ achievement in L2 writing. The results show a significant difference between the mean scores of students’ writing in the control and experimental groups. This may imply that training prewriting strategies had a positive effect on Iranian EFL medical students’ achievement in L2 writing. This finding is in line with previous studies in that prewriting strategies could be effective to improve students’ writing (e.g., İnal, 2014). The finding is also supported by Jiwprasat (2012) who found that the students who received the prewriting instruction performed better in their writing than those who just wrote based on traditional teaching practice.

The comparison between various kinds of prewriting showed that listing was the best prewriting strategy while mapping and free writing took the second and third place, respectively. This may imply that in using prewriting strategies, students benefited more from listing than mapping and free writing. The finding further supports Mahnam and Nejadansari’s (2012) ideas who believed that like brainstorming, listing can stimulate students to think deeply about what they are going to write. These types of prewriting can enhance students’ curiosity and creativity to organize their ideas and activate their imagination. Our result reflects this idea that listing is an appropriate prewriting strategy which facilitates students’ writing by controlling their thoughts consciously as they plan to start writing (Dujsik, 2008).

According to Dujsik (2008), prewriting strategies have potential to be taught to enhance ESL students’ writing. This theoretical concept could be supported by this study, too. The main difference is that the students who took part in this study were EFL learners. A reasonable conclusion is that prewriting activities may provide a chance not only for EFL but also for ESL learners to organize and analyze their knowledge before writing their first draft (Jiwprasat, 2012).

Another important finding was that no significant difference was found between male and female EFL medical students’ writing in terms of applying different types of prewriting strategies. In a word, gender did not have any effect on applying different types of prewriting. Although this

finding is in line with the study conducted by Hashempour et al. (2015), it does not support other researchers' ideas that students' gender can affect their prewriting (Zhang & Vukelich, 1998).

In this study, a few students stated that using prewriting strategies was a time-consuming process and did not have any impact on their writing improvement. The findings overlapped with studies that showed prewriting did not affect students' writing (Johnson et al., 2012). In contrast, most students had a positive perception towards using prewriting strategies; they indicated that prewriting strategies could help them improve their writing skill to be a good writer. They also had more opportunities to practice their writing by applying different strategies such as listing, mapping, and free writing. This idea is supported by many studies such as Jiwprasat (2012), and Hashempour et al. (2015).

Conclusion

This study confirmed that prewriting strategies can improve students' writing. Like other studies, the study is subject to some limitations. One of the limitations is sample size; the power of our findings might increase if we increased the number of students. This study was conducted with medical EFL students; a similar study could be conducted with students in other disciplines and at different levels. In addition, this study was carried out in one semester. Longitudinal research is required to examine the long-term effect of teaching prewriting strategies. Due to time constraints, only three main types of prewriting strategies were applied in this study. The result could be different if we examined the effect of other prewriting strategies such as outlining, clustering, and looping on students' writing.

The findings of this study may hold important implications for EFL teachers, researchers and writing ESP experts who are searching for effective ways to improve EFL learners' writing skill. Likewise, engaging students in prewriting strategies might assist students to generate ideas and knowledge about the topic to start writing. In addition, the accomplishment of prewriting may offer encouragement and self-esteem to learners to be actively involved in the writing process. Our results might assist administrators and EFL teachers in making informed decisions to select writing strategies that could facilitate EFL learners' writing process. It might also assist EFL learners to enhance their writing quality. Finally, using various prewriting strategies may open new doors to

material designers, EFL teachers, researchers, writing ESP experts, and curriculum designers to improve their learners' writing.

Acknowledgment

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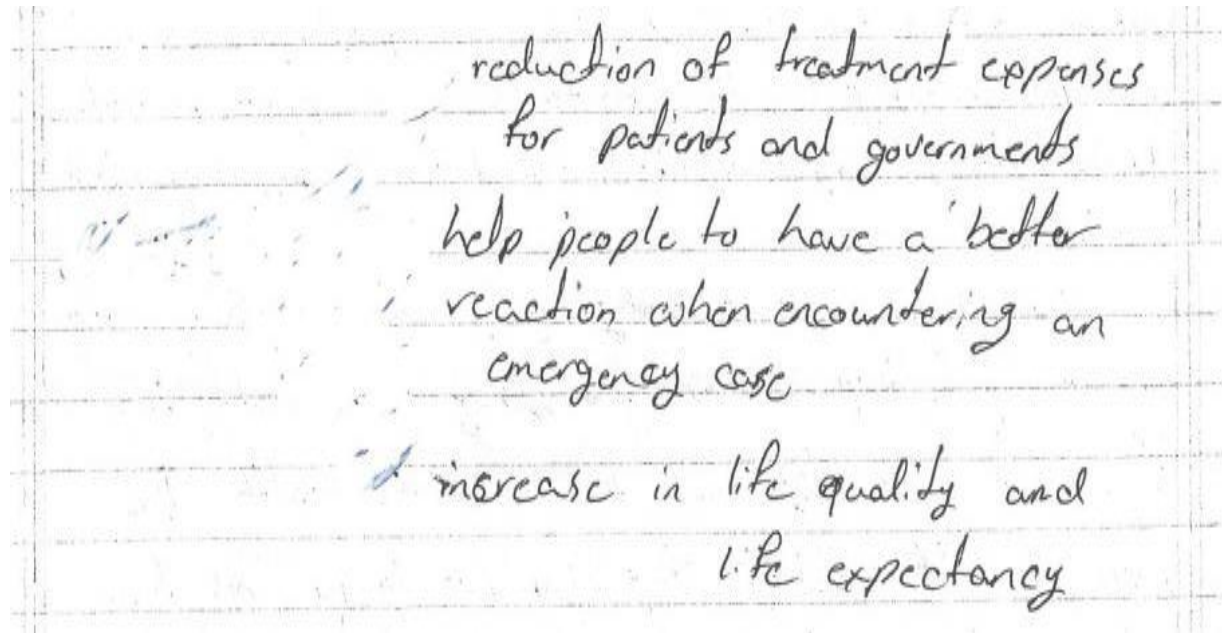
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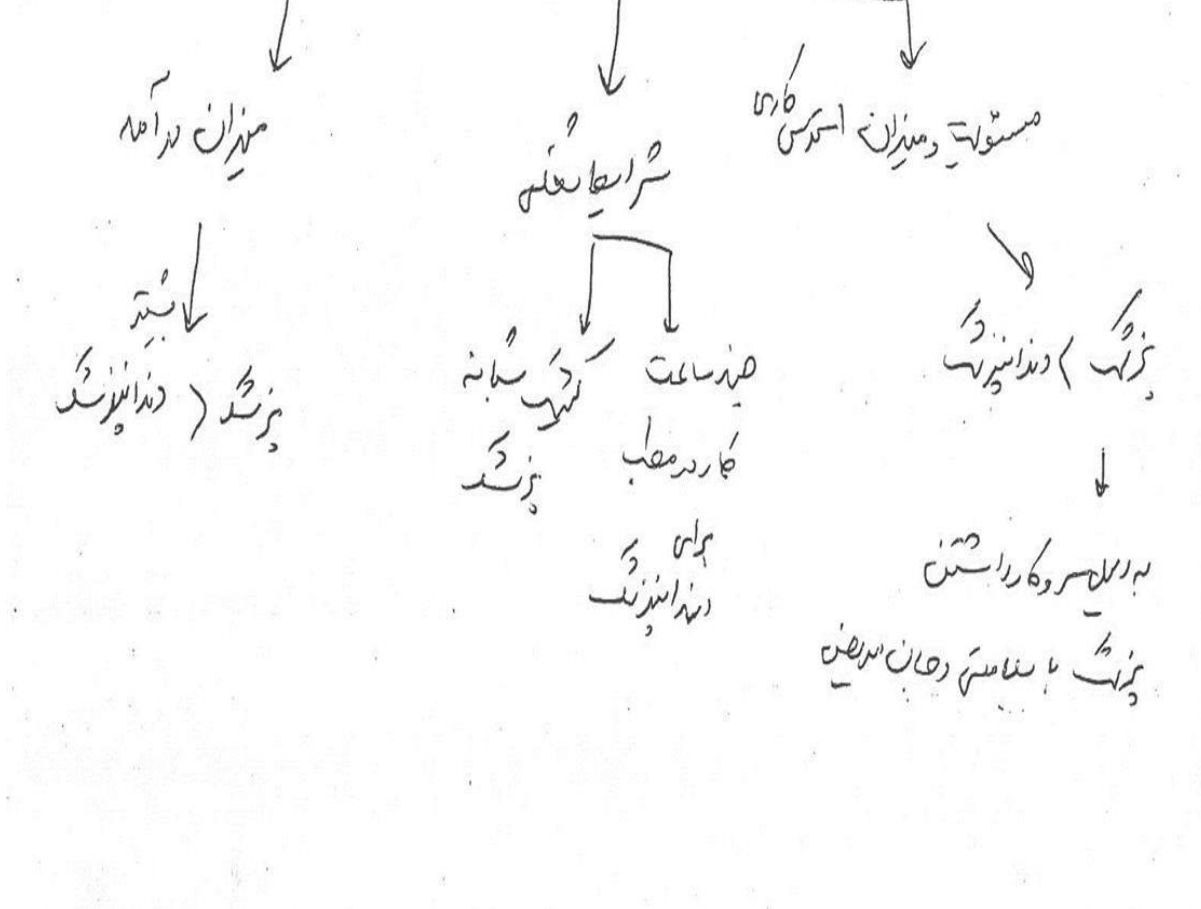
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Appendix 1

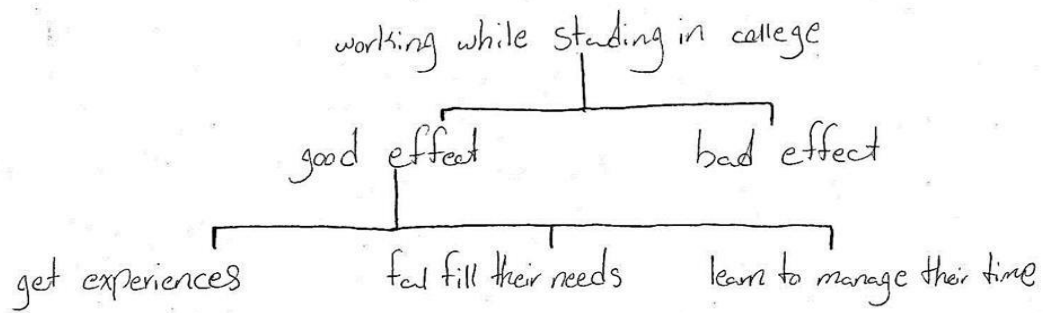
Prewriting samples

Listing in L2 for W1





Mapping in L2 for W3



Appendix 2

Prompts

1. What are the effects of religious beliefs on end stage patient's quality of life?
2. Compare careers as a family physician and a doctor.
3. Should universities accept the same number of male and female medical students each year?

Appendix 3

Analytic scoring rubrics

I. Vocabulary 1 2 3 4 5

Comments for improvements

- a. Completely accurate and appropriate, no errors
- b. Usually accurate and appropriate, few minor errors
- c. Frequently accurate, occasional inaccuracies
- d. Not extensive enough, frequent inaccuracies, limited vocabulary
- e. Completely inadequate and inaccurate, lots of major errors

II. Grammar 1 2 3 4 5

Comments for improvement:

- a. Complete mastery over grammar, variety in sentence structure and lengths, no errors
- b. May contain few errors that do not interfere with comprehensibility
- c. Some minor errors that may interfere with comprehensibility, some control of major patterns
- d. Many errors that interfere with comprehensibility, little control of major patterns
- e. Almost all grammatical patterns incorrect, lots of major errors leading to complete in comprehensibility

III. Organization 1 2 3 4 5

Comments for improvement

- a. Relevant, fully informative; adequate level of creativity and detail; well-organized, logical
- b. Generally informative, may lack some creativity and detail
- c. Usually informative; occasional lapses in organization and/or coherence
- d. Incomplete; lacks important information and creativity; poorly developed, lacks coherence
- e. Not informative, provides little or no information, lacking key components, organized incoherently

IV. Mechanics 1 2 3 4 5

Comments for improvement:

- a. Completely accurate and appropriate, no errors
- b. Generally accurate, few minor errors
- c. Usually accurate, frequent inaccuracies not interfering with comprehensibility
- d. Completely inaccurate, lots of major errors

Note:

- 5. No errors
- 4. 1-3 errors
- 3. 4-6 errors
- 2. 7-9 errors
- 1. 10 and over

Appendix 4

Interview questions

1. What is your idea about using prewriting strategies?
2. What is the most effective language for prewriting? English or Persian? More explain.
3. What kind of prewriting (free writing, listing, concept mapping), do you like to use?
Provide your reasons.
4. Is it better to use the prewriting strategies in writing a paragraph or an essay?



Writing about the Writing Center in the Asian Context: Exploring the Mis/Match between the Reading Levels of Self-Access Materials and the Students Who Visit the Center

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Biodata

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Abstract⁷

An examination of writing center literature shows that North's (1984) idea about the library resource center having a place in the writing center has become a historical constant in North American universities and is becoming so in the rising number of centers in Asia (Baker, 2018). And while studies done in NES and ELL contexts point to the difficulties postsecondary ELL students could have with the level of materials found in these resource libraries (e.g., rhetorics), none have (a) investigated availability (i.e., a survey of all of the rhetorics available in a geographic market) and (b) none have done this while relating the readability of those texts with the abilities

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of an ELL population. This study is intended to fill these gaps. The study explored one Asian market (i.e., Taiwan) and found that 12 rhetorics are available on the local market. It additionally found that (a) none of the rhetorics on the market are accessible to 53.85% of the students' reading levels and (b) only a limited number of the exemplars in the rhetorics are accessible to the other 46.15% of the students. The paper also discusses the results' relevancy to the larger Asian context and poses suggestions for further study.

Key Words: lexile, readability, rhetorics, self-access, writing program administration

Introduction

The goal of the writing center, North explains in his 1984 article "The Idea of the Writing Center," is to be more than a fix-it shop for unprepared writers. The writing center, he reports, should be a "physical locus for the ideas and ideals the university has about writing" (p. 446). One idea congruent with this theme is that the writing center needs to "make sure that writers, and not necessarily their texts, are what get changed" (p. 438). When describing how the writing center is to affect this change, a great deal of scholarship has been devoted to the sociocultural nature of the tutor-student relationship (Clark & Healy, 1996). The sociocultural tutor-student dynamic, however, is not the only part of North's article worthy of attention. The point North makes about the importance of providing a library resource section in the writing center has also been seen as important both for the university North describes and the other institutions he speaks to (Harris, 1992), specifically in the way self-access library resources can be used to support the sociocultural dynamic between the tutor and tutee and as resources that offer students the opportunity to engage in self-directed learning: "a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying . . . resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" (Knowles, 1975, p. 18).

An examination of writing center literature shows that North's idea about the library resource center having a place in the writing center has also become a historical constant (see Olson, 1984; Simpson, 1985; Harris, 1992; Chromik, 2002; Childers, 2006; Baker, 2018). In the same year of North's article, for example, Olson (1984) similarly wrote, "stock[ing] the center . . . with a collection of composition and English texts" (p. 90) is one of seven "administrative matters

germane to the writing center” (p. vii). A picture of the composition texts directors choose to put on their library resource shelves also emerges. In addition to the dictionaries, handbooks, style guides, thesauruses, and other materials, Kinkead and Harris (1993) found that directors list rhetorics among the materials they place on their self-access library shelves: i.e., rhetorically organized anthologies of paragraphs and essays “which explicate major rhetorical forms, present sample texts exemplifying major rhetorical patterns, and offer procedures to show students how to reproduce these patterns and genres in their own writing” (Ferris & Hedgcock, 2005, p. 130). These are not to be confused with thematic readers, anthologies which are primarily thematically organized.

Examining the literature, it can be seen that writing centers outside the North American context, e.g., in Asia, although fewer in number, are becoming a regular part of universities (Chang, 2013). The literature also shows that centers in Asia, like their North American counterparts, offer many services in addition to tutoring as part of the holistic writing center experience (Hsu, 2007; Paiz, 2017; Tan, 2011), to include a variety of self-access opportunities, one of which is a self-access library resource section that students can use to access a variety of English composition related texts, to include those which are the focus of this study (i.e. rhetorics) (Baker, 2018).

Seeing the need for and providing a resource center is one thing. Stocking it with resources, however, is another. Like the act of selecting any text for any group of students, the process of selecting texts for writing center resource libraries (i.e. rhetorics), both in North American settings and for writing centers in Asia, is not simply a matter of purchasing texts and placing them on shelves. It requires two rather involved tasks: (a) determining text availability and (b) determining text appropriacy.

Literature Review

The First Task: Determining Text Availability

The first task, determining text availability, requires a survey of what rhetorics are available on the local market. The reason is that publishers offer a much smaller number of texts to local international markets than they do to North American markets. They also offer these texts at much lower prices, as much as 50% less (Ongchin, 2007). Thus, because writing centers outside the

North American context, like those in the U.S., often face limited budgets, it is prudent for such writing centers to try to purchase texts locally rather than attempting to buy texts from international sources, which are more expensive.

The Second Task: Determining Text Appropriacy

The second task, determining text appropriacy, requires the writing center to determine which of the texts available to the local market are appropriate for the students who may visit the center. Choosing appropriate materials, such as rhetorics, for resource libraries is important because, while rhetorics provide genre specific models of the type of writing students intend to do, and those who read genre specific materials tend to demonstrate a tacit knowledge of conventional formal features of written text (White, 1987; Krashen, 2004, Thaiss & Zawacki, 2006), as much as a .50 to .70 correlation (Grabe, 2003), such benefits cannot be achieved unless the students can successfully engage the reading materials they encounter. In short, students can't learn much from books they can't read (Allington, 2002).

To make sure students can engage the material (i.e. rhetorics), writing center staff must engage in a task "familiar to all people who choose books for their own use" (Gilliand, 1972, p. 12). They need to choose texts which will be a good fit for the readers who might use them (Dickinson, 1987; Gardner & Miller, 1999; Knowles, 1975), "the study of which . . . has come to be called readability" (Gilliand, 1972, p. 12).

Historically, the study of readability has been defined in many similar ways, but each definition emphasizes the importance of considering the text, the reader, and the interaction between the two. An examination of the many definitions that have been historically applied to this term illustrates this point (see Dale & Chall, 1949; Klare. 1963; Kintsch and Vipond, 1979; Harrison.1980; Kintsch & Miller, 1981; Chall, Bissex, Conrad, & Harris-Sharples, 1996; Schirmer & Lockman, 2001). That is, the procedure to determine readability requires considering all three in a step-by-step fashion: (a) an assessment of the texts' readability level(s), (b) an examination of the students' reading levels, and (c) a comparison of the two, albeit the first two steps can be reversed.

When examining a text, the first step, a readability formula is most often employed to determine the text's readability level, a predictive device which provides an objective quantitative estimate

of text's difficulty either in U.S. grade levels or on a numerical cline of difficulty defined internally to a specific formula based on two factors which have been found to be good predictors of readability with relation to style: semantic (i.e., word) and syntactic (i.e., sentence) difficulty (Chall, Bissex, Conrad, & Harris-Sharples, 1996)

When exploring students' reading levels, the second step, a variety of tools are often employed: (a) Informal assessment instruments (e.g., observations, interviews; curricula based instruments; portfolios; informal reading inventories--IRIs) and (b) formal assessment instruments (i.e. standardized tests).

And to compare the two (i.e., students and texts' levels), percentage and frequency are often described.

Research in Native English Speaker Contexts

Studies that have investigated the appropriacy of texts for student populations in North American NS contexts have been done at elementary (Amendum, Conradi, & Hiebert. 2017; Gallagher, 2017), secondary (Chiang-Soong & Yager, 1993), and postsecondary (Peng, 2015; Plucinski & Seyedian, 2013) institutions with learners and their texts across the curriculum. The largest amount of studies at the postsecondary level (the focus population of this study) has been done with texts in the sciences, followed by an abundant, yet smaller, number done in the content areas. English composition subject area texts, however, have received markedly little attention (see Block, Blair, & Outlaw, 1976; Gibson, 1971; Hagstrom, 1971; McClellan, 1970; McClellan & McClellan, 1973; Osbourne & Barnes, 1979; Pride, 1987), with rhetorics (the focus of this study) receiving even less.

The few studies that have investigated the appropriacy of rhetorics for postsecondary populations (see Cline 1971, 1972; Auvenshine, 1978; Fox, 1978; Morrison, 1978; Dunn, 1983) have, like this study, done so using the aforementioned three-stage process. Each for example, used a readability formulae (e.g. the Dale-Chall, Flesch, Smog, Fry, Gunning-Fog, Raygor, Spache formulae) to examine a varying number of texts (range 5-33), which included a limited number of which rhetorics (range 1-4). And each examined a varying number of students (range 222-334) by using a variety of instruments (e.g. The Nelson-Denny Reading Test, the ETS Cooperative English test).

Each of these studies then reported that the texts, and more specifically the rhetorics, were above the students' reading levels.

The limited number of NS studies in this area and the lack of more recent attention to the subject is not surprising, as Garvey (1989) early on pointed out. It is, however, disappointing. This is because (a) hundreds of rhetorics have been published since they first appeared in the 1890s, and many are still in regular use today, up to two hundred in any given year (Bloom, 1999); (b) the reading difficulty of paragraphs and essays has been cited as a factor to be considered when including them in a rhetoric (Bloom, 1999); and (c) the difficulty of paragraphs and essays therein, like the difficulty of reading materials for all subjects, is an area worthy of consideration.

Research with English Language Learners in the Asian Context

Readability research in NS contexts and that done in ELL populations across Asia share some similarities. As with studies done in NS contexts, studies across Asia have explored the appropriacy of texts for student populations at elementary, secondary, and postsecondary institutions with learners and their texts across the curriculum (sciences, content areas, English language arts, EFL). These are listed in Table 1.

Table 1: Readability Studies with ELLs Across Asia

Region	Location	Author(s)
Eastern Asia	China	Wang & Sachs (2011)
	Japan	Browne (1996)
	S. Korea	Odo (2018)
	Taiwan	Chang (2003)
South-Eastern Asia	Afghanistan	Richards, Keshawarz & Alnajjar (2009)
	Indonesia	Husna (2016)
	Vietnam	Varughese (2009)
	Thailand	Ward (2001)
	Laos	Bouangeune (2008)
	Singapore	Teng Fatt (1991)
	Brunei	Burns & Charleston (1997)
Southern Asia	Pakistan	Mahmood & Mahmood (2011)
	Iran	Riazi (2010), Mohebbi (2016)

	Turkey	Eroglu (2005)
Western Asia	Saudi Arabia	Hussein & Al-Emami (2016)
	Yemen	Habtoor (2004)
	Jordan	Freahat (2014)
	United Arab Emirates	Al Qaydi & Abdulla (2015)
	State of Palestine	Hamad & Latif (2012)
	Oman	Noone (2018)

The articles listed in Table 1 are arguably different in that they address (a) a variety of different texts with ELLs in a variety of Asian regions, (b) they describe the mismatch of text/student levels using different instruments (e.g., a variety of quantitative formulae (Mohebbi, 2016)) and qualitative methods (Wang & Sachs, 2011), and (c) they describe their results in different ways, e.g., statistically (Freahat, 2014) or with terms like the texts were “excessively challenging” (Odo, 2018, 750). They all, however, have two things in common with each other and their North American counterparts: (a) They repeatedly report that the texts under study are too difficult for the intended populations and that (b) there is pervasive call to attend to students’ levels when choosing texts in such settings. That is, the readability a text should be considered when adopting texts (Smart & Jagannatha, 2018).

There is, however, one marked difference between the literature found in North American and Asian contexts. While investigations of rhetorics with NES postsecondary populations are markedly limited in NS contexts, such work with postsecondary ELL’s and these texts was noticeably absent during the search for literature. This is disturbing, especially since teachers of ELLs (Ko, 2009; Seguin, 1989; Shen, 2017; Wang & Sachs, 2011), as Smart & Jagannatha (2018) do in their report, “Textbook Policies in Asia: Development, Publishing, Printing, Distribution, and Future Implications”, cite appropriate reading level as an important criterion used in the selection of reading materials.

This is also troublesome because studies done with postsecondary ELL populations across Asia and other sorts of texts have repeatedly shown that postsecondary level ELL students display a reading level below that which is needed for the college level study of English texts (Her, 1994; Lin, 2003; Tan, 2009).

The Gap that Needs to Be Addressed

Although studies done in NES and ELL contexts point to the difficulties postsecondary ELL students in Asia could have with the level of rhetorics, none of them have (a) investigated availability (that is, provided a complete survey of all of the rhetorics available in a geographic market), and (b) none have done this while relating the readability of those texts to the reading levels of an ELL population. This study is intended to fill these gaps.

To explore these gaps, this study posed two questions: (1) What rhetorics are available on one Asian market (i.e., Taiwan)? And (2) Which rhetorics available on that market contain writing exemplars (i.e., paragraphs and essays) that are accessible to the reading levels of the selected ELL population?

Methods

To collect and analyze the data needed to answer the two research questions, a two-step research design was employed. This is illustrated in Figure 1.

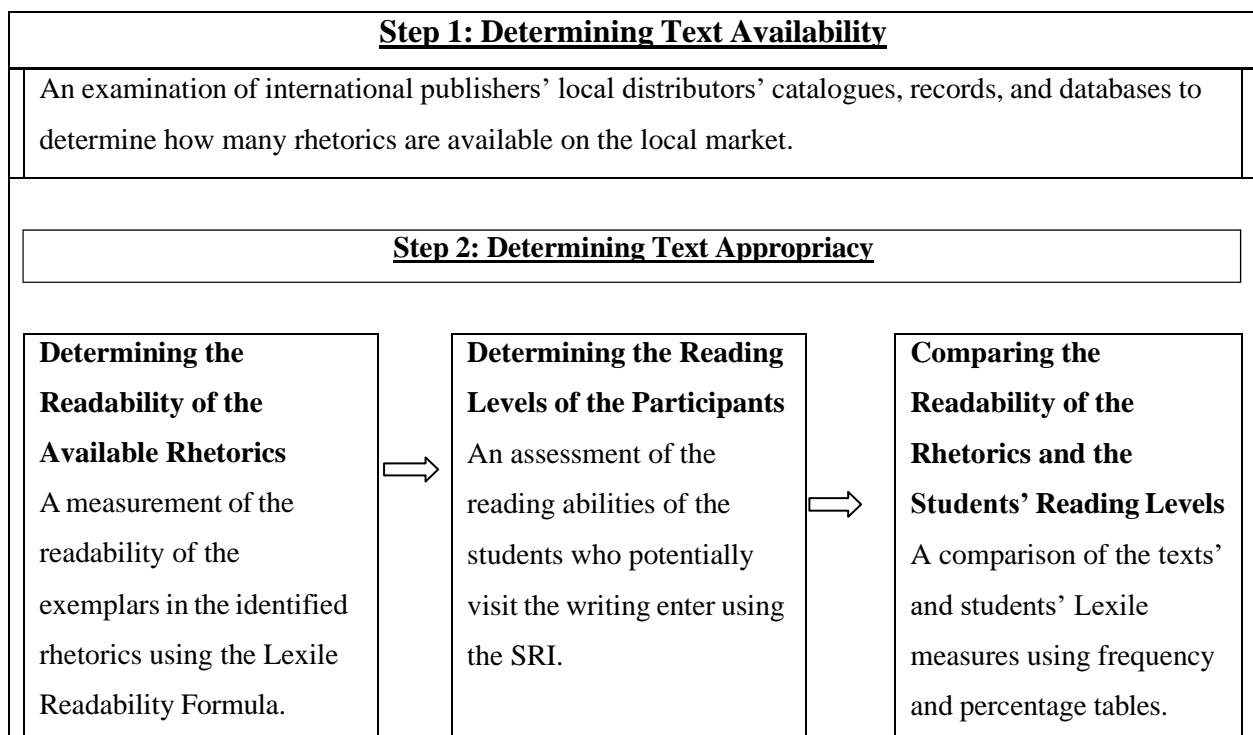


Figure 1: Sequential Research Design.

Step 1: Determining Text Availability

Following the design illustrated in Figure 1, the first step of the study addressed the first research question: What rhetorics are available on the local market? To create the list of rhetorics available on the local market and to obtain each rhetoric, I visited international publishers' distributors in the target context and inspected their catalogues, records, and databases.

Step 2: Determining Text Appropriacy

The second step of the study addressed research question two: Which rhetorics available on the local market contain writing exemplars that are accessible to the reading levels of the selected population. To address this question, we explored three sub questions: (a) Which rhetorics available on the local market are completely accessible to the selected population in that all of their writing exemplars are at or below the reading levels of the selected population? (b) Which rhetorics available on the local market are completely inaccessible to the selected population in that all of their writing exemplars are above the reading levels of the selected population? And (c) Which portions of the rhetorics available on the local market are accessible to the students who read in each of the Lexile zones reported by the reading test chosen for this study, the Scholastic Reading Inventory (SRI)?

To address question 2 and its sub questions, this step, as illustrated in Figure 1, had three quantitative stages (a) Determining the Readability of the Available Rhetorics, (b) Determining the Reading Levels of the Participants, and (c) Comparing the Readability of the Rhetorics and the Students' Reading Levels. These are described below.

We (a research assistant and I, hereafter described as we) conducted these stages at Jinwen University of Science and Technology in New Taipei City, Taiwan, a university which offers its 9,000 students undergraduate and graduate degrees in 16 majors, to include a bachelor of arts in Applied English (the degree the population of this study is seeking). The university also maintains a writing center. The writing center serves entire student community and is staffed by paid, student-tutors and a small number of dedicated teacher volunteers.

Determining the Readability of the Available Rhetorics

To determine the readability levels of each rhetoric, stage 1, we examined the writing exemplars therein (i.e., the exemplar paragraphs and essays) (n=867). We analyzed each exemplar using the Lexile Readability Formula via a non-fee based computerized version of the Lexile Analyzer available to researchers.

Determining the Reading Levels of the Participants

For stage 2, Determining the Reading Levels of the Participants, we administered the SRI. The participants for this stage were students enrolled in five of the seven sections of sophomore composition at the university, 91 of the English Department's 135 sophomores. The sample was chosen for three reasons: (a) The sophomore class is one of two groups who take composition courses at the university (i.e., freshman and sophomore Applied English majors), (b) the sophomore class makes up the majority of visitors to the writing center, and (c) the students were enrolled in the sections of composition the researcher was given access to.

Comparing the Readability of the Rhetorics and the Students' Reading Levels

For stage 3, Comparing the Readability of the Rhetorics and the Students' Reading Levels, we first separated the students' Lexile measures into a BR (*Below measurable Reading* as indicated by Lexiles) zone and 12 additional 100L zones from 0 to the upper end of the zone of the students' Lexile range (1199L). Second, we grouped the exemplars from each text into 100L zones. And third, we compared both sets of data using frequency and percentage tables.

Results

Findings for Research Question One

The purpose of step one of the study was to answer the first research question: What rhetorics are available on the local market? The study found that 12 rhetorics are available on the local market. These are listed in Table 2.

Table 2: Rhetorics Available on the Local Market

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1. Bloom, L. (Ed.). (2007). *The essay connection*. New York, NY: Houghton Mifflin.
 2. Buscemi, S. V., & C. Smith (Eds.). (2007). *75 readings plus*. New York, NY: McGraw-Hill.
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- Conlin, M. L. (Ed.). (2008). *Patterns plus: A short prose reader with argumentation*. New York NY: Houghton Mifflin.
- Cooley, T. (Ed.). (2003). *The Norton sampler: Short essays for composition*. New York, NY: Norton & Company.
- Kane, T. S., & Peters, L. J. (Eds.). (1986). *Writing prose: Techniques and purposes*. New York, NY: Oxford University Press.
6. Levin, G. (Ed.). (2001). *Prose models*. Belmont, CA: Wadsworth.
- Muller, G. H., & Wiener, H. S. (Eds.). (2009). *The short prose reader*. New York, NY: McGraw-Hill.
- Penfield, E. (Ed). (2007). *Short takes: Model essays for composition*. New York, NY: Pearson-Longman.
9. Schwegler, R. A. (Ed.). (1988). *Patterns in action*. Glenview, IL: Scott Foresman.
10. Schwegler, R. A. (Ed.). (2004). *Patterns in exposition*. New York, NY: Pearson-Longman.
- Seyler, D. U. (Ed.). (2001). *Patterns of reflection: A reader*. Needham Heights, MA: Pearson.
- Strobeck, S. W., & Thompson, L. A. (Eds.). (2001). *The resourceful reader*. Orlando, FL: Harcourt College.
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Findings for Research Question Two

The purpose of step two of the study was to answer the second research question: Which rhetorics available on the local market contain writing exemplars that are accessible to the reading levels of the selected population? This step consisted of a three-stage process. The results of these three stages are presented here under three subheadings: (a) The Readability of the Exemplars in the Available Rhetorics, (b) The Reading Levels of the Participants, and (c) A Comparison of the Readability of the Rhetorics and the Participants' Reading Levels.

The Readability of the Exemplars in the Available Rhetorics.

Our examination of the 12 texts showed that they contain a total of 867 exemplars across a wide range of Lexile measures (i.e., 610L to 2210L). Examining the frequency (*f*) of the exemplars in each of the Lexile zones and their accompanying percentages (%), we found that all of the exemplars in each text, as shown in Tables 3-5, are above 600L with varying frequencies and percentages in each of the zones up through the 2200L-2290L zone.

Table 3: Readability of Rhetorics 1-4

1. Essay Connection	2. Reading Plus	3. Patterns Plus	4. Norton Sampler
Number of Exemplars in Each Rhetoric			
76	71	83	53

Lexile Measures	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%
600L-690L	0	0.00%	0	0.00%	1	1.20%	0	0.00%
700L-790L	2	2.63%	2	2.82%	4	4.82%	1	1.89%
800L-890L	7	9.21%	4	5.63%	11	13.25%	7	13.21%
900L-990L	7	9.21%	5	7.04%	10	12.05%	6	11.32%
1000L-1090L	14	18.42%	18	25.35%	17	20.48%	10	18.87%
1100L-1190L	12	15.79%	16	22.54%	12	14.46%	13	24.53%
1200L-1290L	10	13.16%	13	18.31%	14	16.87%	7	13.21%
1300L-1390L	11	14.47%	10	14.08%	9	10.84%	5	9.43%
1400L-1490L	11	14.47%	3	4.23%	2	2.41%	3	5.66%
1500L-1590L	2	2.63%	0	0.00%	2	2.41%	0	0.00%
1600L-1690L	0	0.00%	0	0.00%	1	1.20%	1	1.89%
1700L-1790L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
1800L-1890L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
1900L-1990L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2000L-2090L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2100L-2190L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2200L-2290L	0	0.00%	0	0.00%	0	0.00%	0	0.00%

Note. The exemplars are reported in Lexile measures up to 90L in each zone (e.g., 600L-690L) because the Lexile Readability Formula reports measures in this fashion.

Table 4: Readability of Rhetorics 5-8

	5. Writing		6. Prose		7.	Short	Prose	8. Short
	Prose		Models		Reader		Takes	
	Number of Exemplars in Each Rhetoric							
	104		106		50		51	
Lexile Measures	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%	<i>F</i>	%
600L-690L	2	1.92%	0	0.00%	0	0.00%	0	0.00%
700L-790L	4	3.85%	0	0.00%	1	2.00%	1	1.96%
800L-890L	5	4.81%	5	4.72%	0	0.00%	4	7.84%
900L-990L	10	9.62%	6	5.66%	6	12.00%	8	15.69%
1000L-1090L	13	12.50%	11	10.38%	8	16.00%	7	13.73%
1100L-1190L	21	20.19%	30	28.30%	16	32.00%	9	17.65%
1200L-1290L	22	21.15%	22	20.75%	4	8.00%	13	25.49%
1300L-1390L	13	12.50%	17	16.04%	8	16.00%	6	11.76%
1400L-1490L	5	4.81%	9	8.49%	5	10.00%	2	3.92%
1500L-1590L	5	4.81%	3	2.83%	1	2.00%	1	1.96%

1600L-1690L	2	1.92%	1	0.94%	0	0.00%	0	0.00%
1700L-1790L	1	0.96%	2	1.89%	0	0.00%	0	0.00%
1800L-1890L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
1900L-1990L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2000L-2090L	0	0.00%	0	0.00%	1	2.00%	0	0.00%
2100L-2190L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2200L-2290L	1	0.96%	0	0.00%	0	0.00%	0	0.00%

Note. The exemplars are reported in Lexile measures up to 90L in each zone (e.g., 600L-690L) because the Lexile Readability Formula reports measures in this fashion.

Table 5: Readability of Rhetorics 9-12

	9. Patterns in Action		10. Patterns of Exposition		11. Patterns of Reflection		12. Resourceful Reader	
	Number of Exemplars in Each Rhetoric							
	47		78		73		75	
Lexile Measures	F	%	F	%	F	%	F	%
600L-690L	0	0.00%	0	0.00%	1	1.37%	0	0.00%
700L-790L	2	4.26%	1	1.28%	1	1.37%	1	1.33%
800L-890L	1	2.13%	5	6.41%	3	4.11%	0	0.00%
900L-990L	6	12.77%	6	7.69%	11	15.07%	6	8.00%
1000L-1090L	5	10.64%	12	15.38%	18	24.66%	18	24.00%
1100L-1190L	15	31.91%	22	28.21%	20	27.40%	15	20.00%
1200L-1290L	12	25.53%	15	19.23%	12	16.44%	15	20.00%
1300L-1390L	0	0.00%	13	16.67%	5	6.85%	13	17.33%
1400L-1490L	4	8.51%	4	5.13%	1	1.37%	4	5.33%
1500L-1590L	0	0.00%	0	0.00%	1	1.37%	3	4.00%
1600L-1690L	2	4.26%	0	0.00%	0	0.00%	0	0.00%
1700L-1790L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
1800L-1890L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
1900L-1990L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2000L-2090L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2100L-2190L	0	0.00%	0	0.00%	0	0.00%	0	0.00%
2200L-2290L	0	0.00%	0	0.00%	0	0.00%	0	0.00%

Note.

The exemplars are reported in Lexile measures up to 90L in each zone (e.g., 600L-690L) because the Lexile Readability Formula reports measures in this fashion.

Reading Levels of the Participants.

We examined ninety-one students' reading levels using the SRI. The participants' reading levels ranged from BR to 1119L with a mean of 552.27L. Examining the frequency of the students' scores in each of the Lexile zones, we found (as shown in Table 6) that 53.85% of the students read below 600L. Examining the other 46.15% students' reading levels (also shown in Table 6), we found that these students' reading levels fall into five groups: (a) 600L-699L (18.68%), (b) 700L-799L (9.89%), (c) 800L-899L (14.29%), (d) 900L-999L (2.20%), and (e) 1100L-1199L (1.10%). We found no students to read in the 1000L-1099L group or above the 1100L to 1199L zone.

Table 6: Reading Levels of the Participants

The Number of Participants 91		
Lexile Measures	<i>F</i>	%
BR	2	2.20%
0L to 99L	5	5.49%
100L to 199L	4	4.40%
200L to 299L	3	3.30%
300L to 399L	3	3.30%
400L to 499L	17	18.68%
500L to 599L	15	16.48%
600L to 699L	17	18.68%
700L to 799L	9	9.89%
800L to 899L	13	14.29%
900L to 999L	2	2.20%
1000L to 1099L	0	0.00%
1100L to 1199L	1	1.10%

Note.

^a BR represents students who scored below a point that could be measured by the SRI. For the purposes of analysis, they were calculated as '0'. N = 91, Range BR-1119L

A Comparison of the Readability of the Exemplars in the Rhetorics and the Reading Levels of the Participants.

A comparison of the texts' readability levels and the reading levels of the participants provided the data needed to answer the three sub questions related to the second research question: Which texts contain writing exemplars that are accessible to the populations' reading levels? The results for each sub question are presented here.

Q2a Which rhetorics available on the local market are completely accessible to the selected student population in that all of their writing exemplars are at or below the reading levels of the entire population?

We found none of the rhetorics available on the local market to be completely accessible to the selected student population in that all of their writing exemplars are at or below the reading levels of the entire population. This is because we found the range of the texts' Lexile measures to be (as shown in Tables 3-5) from 610L to 2210L, but 53.15% of the students read below the 600L level (see Table 6).

Q2b Which rhetorics available on the local market are completely inaccessible to the selected student population in that all of their writing exemplars are above the reading levels of the entire selected student population?

We found none of the texts available on the local market to be completely inaccessible to the selected student population in that all of their writing exemplars fall above the reading levels of the entire target population. We found each of the texts (as shown in Table 7) to contain a limited number of samples that are accessible to varying percentages of the 46.85% of the students who read in one of five reading groups: (a) 600L-699L, (b) 700L-799L, (c) 800L-899L, (d) 900L-999L, and (e) 1100L-1199L.

Table 7: Comparison of the Readability of the Exemplars and the Reading Levels of the Participants

Rhetorics	Lexile Zones						
	Below 600L	600L-699L	700L-799L	800L-899L	900L-999L	1000L-1099L	1100L-1199L
	-	-	-	-	-	-	-
	600L	699L	799L	899L	999L	1099L	1199L
	The Percentage of Ss That Read in Each Lexile Zone						
	53.85%	18.68%	9.89%	14.29%	2.20%	0.00%	1.10%
	The Percentage of Exemplars in Each Text That are Below or at the Participants' Reading Levels						
1. Essay Connection	0.00%	0.00%	2.63%	11.84%	21.05%	39.47%	55.26%
2. Reading Plus	0.00%	0.00%	2.82%	8.45%	15.49%	40.85%	63.38%
3. Patterns Plus	0.00%	1.20%	6.02%	19.28%	31.33%	51.81%	66.27%

4. Norton Sampler	0.00%	0.00%	1.89%	15.09%	26.42%	45.28%	69.81%
5. Writing Prose	0.00%	1.92%	5.77%	10.58%	20.19%	33.65	53.85%
6. Prose Models	0.00%	0.00%	0.00%	4.72%	10.38%	20.75%	49.94%
7. Short Prose Reader	0.00%	0.00%	2.00%	2.00%	14.00%	30.00%	62.00%
8. Short Takes	0.00%	0.00%	1.96%	9.80%	25.49%	39.22%	56.86%
9. Patterns in Action	0.00%	0.00%	4.26%	6.38%	19.15%	29.79%	61.70%
10. Patterns of Exposition	0.00%	0.00%	1.28%	7.69%	15.38%	30.77%	58.97%
11. Patterns of Reflection	0.00%	1.37%	2.74%	6.85%	21.92%	46.58%	73.97%
12. Resourceful Reader	0.00%	0.00%	1.33%	1.33%	9.33%	33.33%	53.33%

The results (as described in Table 8) showed that all 12 texts were inaccessible to students who read below 600L (53.85% of the population). The results further showed that the students who read in the five remaining groups (46.15% of the population) could only access a limited number of the exemplars in the available texts. The group who read from 600L-699L (18.68% of the population) could only access three of the texts and only a mean 1.5% the exemplars in those texts. The students who read in Group 700L-799L (9.89% of the population) were found to be able to access 11 of the 12 texts, but only a mean 2.97% of the exemplars therein. And the remaining three groups were found to be able to access all 12 texts, but again only in limited amounts: Group 800L-899L (14.29% of the population) could access a mean 8.67% of the 12 texts, Group 900L-999L (2.2% of the population) could access a mean 19.16%, and Group 1100L-1199L (1.1% of the population) could access a mean 60.45%.

Table 8: The Number of Exemplars Accessible to the Reading Levels of the Selected Population

		600L	700L	800L	900L	1000L	1100L
Lexile Zones	Below 600L	-	-	-	-	-	-
Ss' Reading Levels	600L	699L	799L	899L	999L	1099L	1199L
	53.85%	18.68%	9.89%	14.29%	2.20%	0.00%	1.10%

Means of Texts' Lexile Measures Found to Be at or Below the Ss's Reading Levels	0.00%	1.5% ^a	2.97% ^b	8.67% ^c	19.18% ^c	NA ^d	60.45% ^c
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Note.

^a Three texts were found to be accessible to students who read in Group 600L- 699L: 3. Patterns Plus, 5. Writing Prose, 11. Patterns of Reflection.

^b Eleven texts were found accessible to students who read in Group 700L- 799L: 1. Essay Connection, 2. Reading Plus, 3. Patterns Plus, 4. Norton Sampler, 5. Writing Prose, 7. Short Prose Reader, 8. Patterns in Action, 9. Short Takes, 10. Patterns of Exposition, 11. Patterns of Reflection, 12. Resourceful Reader.

^c All 12 texts were found to be accessible to students who read in Groups 800L-899L, 900L-999L, and 1100L-1199L.

^d No students were found to read in Group 1000L-1099L.

Discussion

Acknowledging the need to choose appropriate level materials for writing center self-access libraries in ELL contexts (i.e., rhetorics), this two-step study investigated the availability of such texts on one Asian market (i.e., Taiwan) and compared the reading levels of those texts with the reading abilities of a postsecondary ELL population (Applied English majors at university of science and technology) that visits a university writing center.

The results show that there are a considerable number of rhetorics available for purchase on the local market (N=12), and that they provide a large number of exemplars (n=867), but that these texts (as indicated by a comparison of the texts' and students' Lexile measures) are largely inaccessible to the reading levels of the majority of the students who visit the center, 53.85% (those who read between BR and 599L) and are only limitedly accessible to the other 46.15% of this population (those who read between 600L and 1199L). Thus, the data this study has provided can practically and theoretically inform instructors and writing center staff at the target institution and therefore meets the needs of construct validity.

The data this study has provided can also, in the way of ecological generalizability, inform instructors and writing center staff at other institutions, members of the publishing industry, and the research community that serves ELLs in the Asian context. This is because, while this study was done in one Asian setting (a university of science in technology in Taiwan), the study's findings are relevant to the broader Asian ELL context in that a review of the literature across Asia shows

1. Writing centers, and the self-access resources they provide, are becoming a common part of universities in the Asian context (Baker, 2018; Barnawi, 2018; Chang, 2013; Kunde, Sequeira, & Patil, 2015; Tan, 2011).
2. There is pervasive call to attend to students' levels when choosing texts in such settings across Asia's regions (Smart & Jagannatha, 2018).
3. Students across Asia have been reported to have reading levels too low to attend to the variety of texts they are provided with (See Table 1).

Reflecting on these three points and the findings of this study (i.e., that while there are large number of rhetorics available on the local market, these texts are largely inaccessible to the reading levels of the majority of the students who visit the campus writing center), the hypothesis can thus be posed that rhetorics will most likely pose similar challenges for ELLs who visit writing centers in other Asian contexts, much as the levels of other texts were reported to have done (see Table 1).

To confirm this hypothesis, similar examinations need to be conducted to explore the reading experiences of other populations at other institutions in the Asian contexts. This article was written in such a way to encourage such explorations, i.e., with richly detailed literature review, methodology, and results sections.

I would also like to argue that the call for this hypothesis to be tested is highly relevant and long overdue, as Bloom (1999), following an inadequately short burst of work done in the NS area, 1978-1983 (see Auvenshine, 1978; Cline, 1971, 1972; Dunn, 1983; Fox, 1978; Morrison, 1978), remarked on the importance of considering the readability of paragraphs and essays when including them in rhetorics. And thus, while readability investigations may have prematurely run their course in the North American context, leaving Bloom's call largely unanswered, the sun is just rising in the East and many other parts of the world, and these venues' texts and populations, need and welcome new explorations.

It is further hoped that this article and future explorations done in the larger Asian context this article speaks to will, in keeping with the writing center tradition of "helping one another and sharing what we have learned" (Harris, 1990, p. 16), prompt the publishing of anthologies that are more appropriate to levels of the populations they are marketed to.

Suggestions for Future Study

The information this study provides furthers the literature in ways that can be useful to instructors and writing center staff, members of the publishing industry, and the research community as a whole, but the reported data raises additional questions which merit investigation. The data shows that 12 rhetorics are available to the local market and that they offer 867 exemplars, a considerable number, yet the material therein is largely inaccessible to student population. With this in mind, the following questions arise:

1. Are there rhetorics available for purchase from other markets which may be more accessible to the students' levels (i.e., those who read between BR and 999L), albeit via special orders which may entail additional costs?
2. Considering the students' reading levels, what other texts required of Applied English majors (the population under study) are beyond their reading levels?
3. The study examined the reading levels of sophomore Applied English majors (those who made up the majority of the visits to the writing center) and texts appropriate to their field of study (e.g., rhetorics). However, other years (e.g., freshman, junior, senior) and other majors do use writing centers. Therefore, examinations of other populations and their field specific texts need to be done.

Looking at the results, another very pertinent question arises. This study employed a popular readability formulae which is in use today, the Lexile Readability Formula, a formula which has a great many positive attributes that provide useful quantitative data for both large scale text and reader assessment (via reading tests, e.g., the SRI). However, readability formulae have not been universally accepted as a sublime solution to text evaluation, for they have garnered both praise and criticism. From their inception, they have been praised in that they provide an objective quantitative estimate of two factors which have been found to be good predictors of readability with relation to style: semantic (i.e., word) and syntactic (i.e., sentence) difficulty (Chall & Dale, 1995). However, they have drawn criticism for the same reason (Hiebert, 2011). That is, they usually only focus on these two factors and thus do not explore other quantifiable and qualitatively assessable areas of readability which are highly relevant to text adoption decisions. With this in mind, a final question arises: What factors beyond those measured by the Lexile Readability

Formula influence students' perceptions of reading difficulty when reading exemplars from taken from anthologies?

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