English for Specific Purposes

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English for Specific Purposes (ESP) is, undeniably, more challenging because it deals with the terms and jargon of the English language for a particular context. For instance, learning medical words in English requires specific vocabulary, which might not be part of common ESL. Despite learning ESL since a young age, most learners still face difficulties grasping the language, even more so for ESP learning.

educational scenarios

English for Specific Purposes (ESP)

English Language Teaching (ELT)

mobile learning

sustainable education

vocabulary

1. Introduction

Despite the growing trends of research in ESP, systematic reviews are more towards the ESL [1][2][3], EFL [4][5][6], and ELT fields $\boxed{2}$, thereby leaving a gap. Nevertheless, it is undeniably vital to look into the research trends in ESP, specifically in mobile learning, because ESP is specific.

2. Types of platforms used for mobile learning in ESP

Several reviews related to education level and mobile learning have, been conducted. For example, ref. [8] reviewed mobile learning apps for social, emotional, and cognitive development of Greek preschoolers. The results portrayed that most apps only aimed to teach primary language and numeric literacy, which emphasised memorization, thus discouraging the evolution of thinking skills. Similarly, ref. [9] studied mobile learning in fostering fun learning for preschoolers and found that preschool teachers were not ready to use mobile learning apps in the classroom. Meanwhile, ref. [10] analysed the trend of mobile learning in preschool settings, which reported that only 35% of the studies used mobile devices for language literacy. Most studies paid attention to children's cognitive development. Aside from preschool, ref. [11] reported the roles of mobile learning for learners in 9 to 14 year olds. These reviews show that mobile learning is beneficial in encouraging learning, but also that academic achievement is not associated with mobile apps. The authors of [12] reviewed studies on the issues of mobile learning for hospitality, leisure, sport, and tourism education. The common problem they reported was learners' experiences using mobile learning, as not many mobile learning platforms could teach higher-order thinking skills.

Recent systematic reviews focus more on mobile learning for ESL and EFL purposes. In [4], they reviewed the integration of mobile learning for secondary school EFL learners and discussed the challenges. The highlight from this study showed that mobile learning encourages collaborative learning for EFL learners, similar to another

review carried out by [5]. Mobile learning enhances collaborative skills, one of the keys to sustainable and lifelong education. Contrasting the two reviews, another review by [6] reported the improvement of cognitive abilities of EFL learners through mobile learning. Other studies on mobile learning in the ESL or EFL classroom portrayed the benefits of the implementation of mobile learning, in terms of usability [1] and feasibility [7]. These reviews show that mobile learning is tangible and feasible in language classrooms.

3. Language Skills Focused on Mobile Learning for ESP

In the second research question, we examined the skills practised by the various mobile learning platforms. The language skills in ESP are listening, speaking, reading, writing, vocabulary, and all skills in general. Though grammar is also a language skill, it is not displayed in the following results because none of the studies focused on grammar. **Table 1** below shows the language skills focused on in mobile learning for ESP.

Table 1. Language skills focused on mobile learning for ESP.

Language Skills	Study
Listening	[<u>13</u>]
Speaking/Communication	[<u>14</u>][<u>15</u>]
Reading	[16][17][18][19]
Writing	[<u>20</u>]
Vocabulary	[21][22][23][24][25][26][27]
All skills (language competency)	[<u>28</u>][<u>29</u>][<u>30</u>][<u>31</u>]
Not specified (engagement and motivation)	[32][33][34][35][36][37][38][39][40]

The articles were analysed and categorised according to their English language skills to address the second research question for this systematic review. In [13], they used English language materials in mobile phones to enhance the listening skills of business employees. These materials include listening audios and gap-filling, which were related to their business context. Findings showed that the overall performance improved with the listening materials, but the business employees required more speaking. In [14], authors' conducted a flipped mobile learning classroom, using Schoology for business undergraduates' speaking skills by providing interaction, production, and reflection tasks. The learners improved as the LMS platform allowed them to access the materials anytime. Likewise, ref. [15] used mobile technology as a peer feedback tool to assess the speaking skills of business undergraduates, and learners agreed that the mobile device provided real-time feedback. However, limitations such as screen size were prominent.

In [18], they used a mobile reading app to improve reading comprehension through reading materials and tasks. Likewise, ref. [19] used QR codes as a means for learners to read about fitness machines and their uses in a fitness centre while exercising. Both studies reported that the learners' reading comprehension improved, and they

preferred reading using the mobile platform rather than hardcopy materials. However, ref. [16] reported that learners' engagement decreased when they use mobile platforms to read digital texts.

On the other hand, ref. [20] used Telegram to improve learners' writing skills and reported an improvement in learners' writing performance. Vocabulary is one of the skills focused on in mobile learning. Studies conducted to identify learners' perception towards using mobile learning in improving their vocabulary acquisition reported positive perceptions [21][23][26][27]. Other studies said mobile learning helped learners acquire more vocabulary, and showed that specific discipline apps expanded their vocabulary [22][25].

The authors of [36] investigated the effectiveness of mobile learning in the classroom and found that mobile learning hours correlated with learners' achievement. Likewise, ref. [40] conducted a study with business English undergraduates towards their perceptions of mobile learning and their proficiency. The findings reported that the undergraduates agreed that mobile learning developed their learning proficiency in general. In [33], they carried out a study on learners' satisfaction with their learning achievement and found out that learners could improve their learning when they were in control of their education. Teachers played a role in assisting learners in the classroom. Other studies [28][29] conducted experimental studies towards mobile learning in ESP and learners' language achievements. Both studies reported that mobile learning effectively enhances the language competency of learners, particularly in acquiring specific vocabularies. However, ref. [30] investigated mobile learning with learners' achievement in ESP, their findings reported that mobile learning enhanced learners' achievement, vocabulary acquisition showed a more notable improvement. In [31], they conducted a case study towards a student with disabilities in using mobile technology to assist learning. The student performed satisfactorily in acquiring the language, and showed improvement in both listening and reading skills. However, the teachers involved stated that they had difficulties in preparing materials and required specific teacher training.

Many articles did not specify the skills in their papers, but the articles still focus on mobile learning to enhance ESP, regardless of the unmentioned skills. Studies by [32][34][37][38][39] looked into learners' engagement in mobile learning. Mobile learning is engaging and motivating for learning ESP. On the other hand, ref. [35] conducted a study on the challenges of mobile learning in an ESP classroom and reported that the learners were enthusiastic, but teachers were still adapting to the use of mobile technology in the classroom

4. The Field of Studies Focused on in Mobile Learning for ESP

The third research question addresses the field of study. It is crucial to know the field of study to identify the gap in addressing language issues for a specific context. The categorization of areas is based on [41]. Based on the findings, the business field of studies employed mobile learning for ESP the most, in the domain of social sciences. A more detailed data representation is shown in **Table 2**.

Table 2. Field of studies focused on in mobile learning for ESP.

Field	Programme/Course	Study
Social Science	Business	[21][28][16][14][15][24][25][38][13][40]
	Law	[<u>27</u>]
	Linguistics and translation	[36]
	Administration	[37][18]
Engineering and Technology	Engineering	[32][20][29][34]
	Computer Science	[33][26]
	Technology	[35]
Medical and Health	Allied Health Science	[30]
	Medical	[<u>22</u>]
	Physiotherapy	[23]
	Fitness	[<u>19</u>]
Natural Sciences	Ecology	[17]
Others	Vocational	[<u>39</u>][<u>31</u>]

Knowing the field of studies will help identify the gap and the main focus of ESP in terms of mobile learning. From the data analysis, most of the articles were centralised towards the field of social sciences, mainly in Business-related studies [21][28][16][14][15][24][25][38][13][40]. Next, more articles represented the Engineering programmes [32][20] [29][34]. Various mobile learning alternatives could help other learners in the same field. Hence, this finding is significant.

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