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# Development of an intellegent mobile application for teaching English pronunciation

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**Abstract**

The paper describes the development of an intellegent mobile application that can be used in language learning specially in teaching English pronuciation using speech recognation engine in mobile devices. In this research study the originality of the developed application is that a speech recognition engine has been used on the mobile phone to recognize spoken words so that any pronunciation errors can easily be identified and then corrected. This feature of the apllication increases the motivation of the learner and make learning easier and more enjoyable than the traditional learning methods. The author hopes that the study outlined in the paper becomes a intelligent model for future researchers in foreign language education.
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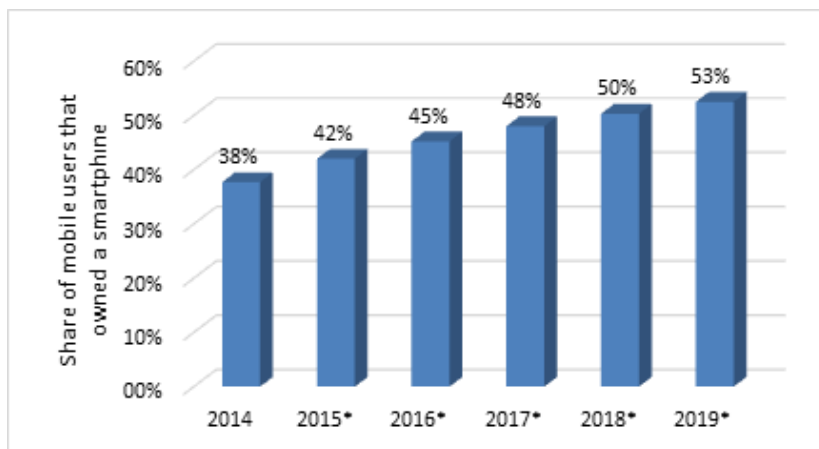
## 1. Introduction

The borders between countries have virtually been removed as a result of the advanced and recent changes in the information technology. Because the English language is spoken or understood in most countries of the world[1], this language has become a generally accepted universal language[2]. As a result of this, it is highly important for the individuals in their professions as well as in their social lives that they can communicate via the English language. Because of the competition between various companies in different parts of the world[3], and also in daily life, such as while shopping, traveling, dining, and even in using the social media sites the individuals are required to understand the English language.

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The use of smartphone is increasing daily. As it can be seen from Figure 1, currently it is estimated that 45.2% of all mobile phone users will use a smartphone in 2016[4]. Because of the features of the smartphone they can be used in education. An Android based mobile pronunciation application has been described by Agusalimet al.[5] to teach English as a foreign language in Indonesia. Literature review was done by Seyedabadi, Fatemi and Pishghadam[6] and they point out the importance of pronunciation in learning the English language as a foreign language.

Table 1.Share of mobile phone users worldwide who owned and used a smartphone from 2014 to 2019 (Statista, 2016).



## 2. Mobile Devices and Education

Learners, teachers, content, environment, and assessment arebasic components of mobile learning[7]. Most important features of mobile learning are portability, mobility, connectivity, flexibility, interactivity, context sensitivity, individuality, and accessibility. Mobile learning is popular generation of e-learning[8,9]. Because of new mobile devices with enhanced capabilities such as high density camera, large storage capacity, large screen size, longer battery life, high quality voice precessing and so on have increased the interest level of language educators specially English[10,11]. Mobile devices increase the motivation[12], make the learning process more interesting[13] and enjoyable[8] and help to improve the skills of the learners in a positive way[14,15].
Using mobile devices in learning English as a second language gained positive feedback from both teachers and learners[14], provide more interesting learning environments[16], allow collaborative activities[17], immediate feedback to students[7], close interaction for students[9], and increase learning performance[18,15].

## 3. The Importance of Pronunciation in Learning English as a Foreign Language

The most difficult skill for the new learners of the English language is the pronunciation[19]. Munro and Derwing[20] have reported that the skill of pronunciation has received a lot of interest because it is a salient feature of any language. Many researches done in the past indicate that correct pronunciation is the key factor in expressing yourself to others intelligibly[6]. Thus, it is apparent that it is required to carry out more research on learning and teaching the correct pronunciation skills[20]. It is apparent that any person with incorrect pronunciation cannot express themselves correctly and efficiently and there is the added risk that they may not be understood by others[21]. Poor pronunciation leads to poor communication power[15]. So that, it is important to learn correct pronunciation however it is complex and difficult[22]. The use of the speech recognition technology in teaching a language subject to new learners is a very new concept[23] and it can be seen in the literature that more studies are being carried out in this field. The study described in this paper is such a new study which concentrates on using a speech recognition engine in an intelligent mobile application in order to teach the English language words to new learners of English as a foreign language.