Assessing the need for technology-enhanced tools to release the sufferings of Cinderella in language teaching (Pronunciation)

Tono Suwartono[1*], Sri Nurhayati[2], Rusdiana Junaid[3]
[1]Department of English Language Teaching, Universitas Muhammadiyah Purwokerto, Purwokerto, Indonesia; suwartono@ump.ac.id (T.S.).
[2]Department of Community Education, IKIP Siliwangi, Cimahi, Indonesia.
[3]Department of English Language Education, Universitas Cokroaminoto Palopo, Palopo, Indonesia.

Abstract: Pronunciation appears to be the most marginalized topic in the curriculum and classroom practices of English as a foreign language at all levels of education, leading to the minimum performance of students in pronouncing English words. The present study investigates the learning problems, teaching practices and needs for media related to the English pronunciation teaching and learning in higher education. It was a survey study participated by 293 university students across departments and faculties at a private university in Indonesia. Data were gathered using a self-administered 5-point Likert scale questionnaire and analysed using descriptive statistics. Results of the study revealed that the university students consider English as a difficult subject. Regarding pronunciation, for them it is considered a complicated aspect to acquire although they perceive their English pronunciation as relatively good. Most students claimed that their English teachers never teach them pronunciation in specific and reported that the teachers mostly use tape-player for teaching pronunciation and seem lowly involved in empowering technology-enhanced instructional facilities. It is obvious that the students need more interesting and practical media to learn English pronunciation. Evidence from this study indicates that regarding English pronunciation the students can be trained intensively with more practical media that facilitate English pronunciation learning.

Keywords: Learning, Media, Pronunciation, Technology, Tool.

1. Introduction

Viewed from the curricula and classroom practices, in the field of English as a foreign language (EFL) teaching in Indonesia and the world, pronunciation has remained the most marginalized. In fact, from the perspective of communication, language education should give paramount attention to this language aspect, as language by nature is speech or spoken [1]. In Indonesia, the EFL classes generally begin with a written mode of classroom activities first, while spoken English and activities are taught later. This to some extent hinders the pronunciation learning once it is introduced to the students, as in comparison to the Indonesian language system, the English pronunciation is highly inconsistent with how it is written. Research shows that introducing the sounds of a language before learners are acquainted with its orthography is more recommended than the other way around [2].

Apart from the reasons behind the issues mentioned above, in an attempt to deal with the situation, we highlight the advancement of technology and its impact on language education instead. Technology nowadays has affected every sector of life, and education is no exception. Experts, scholars, and researchers in language education have made advancements in the use of technology for language teaching and learning [3]-[4]. Computer-assisted language learning (CALL) and other innovations have been recognized for their contributions to language education, especially second/foreign language teaching and learning in the world.

On behalf of professional creativity and innovation, efforts should be made by teachers of English as front liners in language education to develop language teaching and learning technological

advancement in accordance with their students' actual needs [5]. The present study started with the idea to compensate for the loss of pronunciation in English teaching and learning by focusing on the development of teaching and learning media to help learners of English acquire the pronunciation of English within the classrooms and beyond. Bearing this in mind, the media will allow for student-centred learning due to access time flexibility and learner's autonomy.

2. Literature Review

This section reviews previous studies on the features of English pronunciation, problematic sounds of English, and problems as well as solutions in pronunciation teaching and learning.

2.1. English Pronunciation Features

In its broadest sense, the pronunciation of English comprises two aspects (also referred to as features), namely segmental features and suprasegmental features [6]-[7]. As the name implies, segmental features include any discrete "segments" or units that can be identified either physically or auditorily in the stream of speech, i.e., vowel sound, consonant sound, cluster, and diphthong. Suprasegmental features, on the other hand, cover beyond single segments and often extend over a syllable, word, phrase, or even sentence, i.e., stress, intonation, tone, juncture, and rhythm.

In Indonesian, between those two aspects of English pronunciation, segmental features would luckily have a little bit better place. There is an impression that what Indonesian teachers and learners of English know about English pronunciation is all segmental features [8]. If pronunciation is taught, it has something to do with segmental features, almost exclusively.

2.2. Problematic Sounds of English

Indonesian learners of English still face difficulties pronouncing the English language. Adult learners of English at the university level still encounter problems with segmental phonemes [9]. Even teachers of English are also reported to have mispronounced the English word stresses [10]. Indeed, the English word stresses are not easy to master. Learners of English should have adequate knowledge about many stress patterns in the language. Sadly, according to a report, teachers of English in Malaysia cannot even avoid a less problematic matter like intonation, if compared with stress, for instance. They only achieve up to the intermediate level [11], despite its status as a second language in the country.

In the context of Indonesia, learners might feel frustrated with the sound system of English as the target language. Some English sounds are to some extent similar to those existing in the mother tongue, whereas others are totally different. Either case brings about difficulties. In segmental features, consonant sound /ʃ/ as in 'short', or in suprasegmental features, intonation pattern of Wh-questions as in 'What can I do for you?', for example, learners tend to pronounce it as the closest sound or way in the first language background, that may lead to the negative impression [12], unintelligibility [13], and misunderstanding [14] in the part of audience/listener.

2.3. Challenges and Solutions in Pronunciation Teaching and Learning

Concerning pronunciation teaching and learning problems, Darcy [15] mentions three big categories of issues in pronunciation instruction: 1) time obstacle; 2) method obstacle; and 3) focus obstacle. In Indonesia, most likely due to the apparent complexity of English pronunciation, teachers of English not only have problems with what to cover (focus obstacle) in their instructional content but also feel uncertain about how to teach it (method obstacle).

In many instances, pronunciation in the English language classrooms relies heavily on the teacher's own speech and classroom whiteboard. Teacher-centred activity instead of learner-centred activity nearly always takes place when pronunciation is taught. The presence of instructional materials, sources, or media, such as crossword puzzles [16]-[19] and an application-based crossword puzzle, as introduced by Dzulfikri [20] is not supportive of pronunciation, as those things are intended to develop students' vocabulary knowledge (in this case spelling) rather than skill development.

Even though it is widely accepted that pronunciation is the most problematic aspect of the English language, it does not necessarily mean we cannot do anything. As a matter of fact, it is always possible to teach and learn English pronunciation with a gentle approach to it [21]. The real threads are misconceptions, wrong beliefs, or even myths, which are still everywhere [22]. Some English teachers find it too hard to teach pronunciation. It most possibly happens because they are not open-minded. Others have no ways to teach pronunciation other than drills. It is very likely that they do not have the adequate technical know-how. In other words, it depends largely on the teacher. Some EFL teachers who are well equipped with the necessary competencies or committed to their professional development may just utilise digital or electronic information sources, audio, video, and multimedia. Of course, all they need to do is to make lots of preparations to allow for a greater chance to commence a good teaching and learning process.

Media with certain criteria for teaching and learning English pronunciation are badly needed at present. Those media that can excite and challenge students to learn English pronunciation as well as give them a sense of accomplishment or learning achievement should be given priority. It is a challenge for teachers of English to become creative and innovative in such a way that the class does empower students to learn. A huge effort can be made by either developing or utilizing existing media. A good example is a work by AbuZeina et al. [23] developing an application – a kind of digital dictionary – which includes pronunciation as part of its system. Nonetheless, as far as the literature review is concerned, many more studies on media of such kind that take students' real needs into account are urgently required. The present study poses the following research questions:
1. What problems are faced by university students in learning English pronunciation?
2. How were the practices of university teachers in teaching English pronunciation?
3. What are university students' needs for media to learn English pronunciation?

To answer those research questions, a set of methodologies were prepared and are presented in the next section. Research results are presented according to the aforementioned research questions, followed by a critical discussion and reflective conclusions for future endeavours.

3. Methods
This section describes the methodology and methods used in the study, including the research design, involved participants, data collection tools, and analyses.

3.1. Research Design
Regarding the research questions put forward, this study aimed to assess the university students' need for media in their efforts to learn English pronunciation. To attain the set objective, this study utilized a quantitative approach to the problems. In this case, a quantitative survey study was employed. A survey study normally involves a larger sample and covers a wider population [24].

3.2. Participants
The present study involved 293 university students across faculties and departments at a private university in the town of Purwokerto, Indonesia. The extended population was chosen considering the ultimate goal of the present survey, that is, to develop an application as media for learning the pronunciation of English, whose future target users are all types of learners of English at the university level. Requests for permits, the project's purpose, and necessary instructions for the survey volunteers were mailed to the Department Chairs. They were asked for help in recruiting volunteers for the study. Though unequal, all departments were represented.

Table 1.
Profile of research participants.

Genders	Female 203 69%	Male 90 31%		
Age	<20 yrs. 139 47%	20-25 yrs. 154 53%	>30 yrs. 0 00%	
Year of study	I 84 29%	II 55 19%	III 83 28%	IV 71 24%
Department	Non-English 216 74%	English 77 26%		
Experience in English learning	1-5 yrs. 99 34%	5-10 yrs. 82 28%	>10 yrs. 112 38%	

The table above describes the profile of participants involved in this study. It was dominated by female university students reaching almost 70% of participants while none of them aged over 30 years old. They are aged under 20 years old and between 20 and 25 years old accounted respectively 47% and 53% of participants. The study was participated by university students over one-to-four years of study, but the second-year students were merely under 20% of the total participants. Most of the participants attend classes in non-English departments with various experiences in English learning.

3.3. Data Collection
The data of this study were gathered using a 5-point Likert scale questionnaire with response options ranging from strongly disagree to strongly agree. Joshi et al. [25] assert that questionnaire of this type is considered the most commonly utilized instrument for data collection in educational and social science studies, including need assessment [26]-[31]. The questionnaire coverage was carefully constructed in reference to the blueprint already prepared. The questionnaire was administered and distributed online to the participants via Google Form from the end of 2021 through the first week of 2022. The submitted responses on the Google spreadsheet were then cleaned and made ready for analysis.

3.4. Data Analysis
Descriptive statistics involving the mean and standard deviation were applied to analyse the data with respect to responses per item across aspects covered in the questionnaire. The quantitative dataset was counted and tabulated for interpreting trends in the sample. Important findings were critically discussed and conclusions were drawn.

4. Results
To answer the research questions, results from the study are presented in the following three subheadings, namely: 1) English pronunciation learning; 2) English pronunciation teaching classroom practices; and 3) needs for media to learn English pronunciation.
4.1. English Pronunciation Learning
The first issue investigated in this study deals with problems related to the learning of English pronunciation. Four negative (-) questions were asked in the questionnaire about difficulties in learning English and pronunciation, recognizing English sounds and pronouncing English words. Additionally, students' performance of English pronunciation was also asked as a positive (+) question. Table 2 summarizes the mean and standard deviation of the collected data.

Table 2.
English pronunciation learning.

No.	Statements	N	Mean	SD
1	(-) English is a difficult course to learn	293	3.14	1.02
2	(-) English pronunciation is difficult to learn	293	2.85	1.03
3	(+) According to others (e.g., teachers, friends, family) my pronunciation is so far good	293	3.18	0.92
4	(-) The sounds of English are difficult to recognize	293	2.84	0.97
5	(-) It is difficult to pronounce English words	293	3.14	1.00

As can be seen in Table 2, various problems with English emerge, especially the pronunciation faced by university students. In general, although the students valued their English pronunciation as fairly good, it is noticeable that they remained to consider English, in general, and its pronunciation aspect, in specific, difficult. The self-reported mean score for their good English pronunciation is 3.18 while it has a mean of 3.14 for difficult English and pronunciation. For the other statements, it seems that the students encountered smaller difficulties in learning English pronunciation and recognizing the sound of English as it has a mean of merely around 2.85. The data variation is relatively high with no standard deviation under 0.5 points.

4.2. English Pronunciation Teaching Practices
The second issue investigated in this study deals with the practice of university teachers in teaching English pronunciation in the classroom. Three negative (-) questions were asked in the questionnaire about teachers' practices of English pronunciation teaching with analogue media. Three positive (+) questions were asked in the questionnaire about teachers' practices of English pronunciation instruction with digital media. Table 3 summarizes the mean and standard deviation of the collected data.

Table 3.
Practices in English pronunciation teaching.

No.	Statements	N	Mean	SD
6	(-) My English teachers never teach me English pronunciation	293	4.05	1.01
7	(-) My English teachers rely on their speech or my classmates' voice when teaching pronunciation	293	3.52	1.05
8	(-) My teachers use a whiteboard and board marker only when teaching pronunciation	293	3.42	1.20
9	(+) My English teachers use tape-player for teaching pronunciation	293	3.82	0.94
10	(+) My English teachers utilize language laboratory for teaching pronunciation	293	3.09	1.23
11	(+) My English teachers use a kind of application as media for teaching pronunciation	293	3.41	1.15

The table above displays the practice of university teachers in teaching English pronunciation to their students. With the highest mean of 4.05, students reported that their English teachers never teach them English pronunciation. It is also noticeable that teachers mostly use tape-player for teaching pronunciation with a mean score of 3.82 while they seem less intensive in using language laboratory as the mean score is only 3.09. Other aspects have a medium mean of around 3.50. The data variation is relatively high with no standard deviation under 0.5 points.

4.3. Needs for Media to Learn the Pronunciation of English
The third issue investigated in this study was the need for the media to learn English pronunciation. Four positive (+) questions were asked in the questionnaire on students' needs related to appropriate media for learning English pronunciation in the classroom. Table 4 summarizes the mean and standard deviation of the collected data.

Table 4.
Needs for media to learn English pronunciation.

No.	Statements	N	Mean	SD
12	(+) I would like to learn English pronunciation with exciting media	293	4.51	0.72
13	(+) I would like to learn English pronunciation with practical media	293	4.60	0.67
14	(+) I would like to learn English pronunciation with efficient (time, energy, cost) media	293	4.52	0.75
15	(+) I would like to learn English pronunciation with effective media	293	4.60	0.68

Table 4 above lists university students' need for media to learn English pronunciation with proper media. Their need for more interesting, efficient, and effective media, as well as more modern media to learn English pronunciation is apparent because all the mean scores have reached over 4.50. The data variation is relatively high with no standard deviation under 0.5 points.

5. Discussion

The present study was aimed at investigating learning problems, teaching practices, and needs for media related to teaching and learning English pronunciation in higher education. Based on a survey of university students from various departments and faculties of a private university in Indonesia, this study reveals multiple issues encountered by university students regarding their learning of English pronunciation, university teachers' pronunciation teaching practice, and students' needs for media in learning English pronunciation. Evidence from this study extends comprehension of teaching and learning English pronunciation in a higher education context. Besides providing this discussion, limitations and avenues for upcoming research are accordingly mentioned.

5.1. Students' Problems with English Pronunciation

Although the students identified that their English pronunciation is fairly good, it is noticeable that they remained to consider English and, without exception, the pronunciation aspect, difficult. It seems that learning English is challenging for them as their mother tongue is not English and they learn it as a second/foreign language [32]-[33]. Consequently, pronouncing English is also tricky for them as the pronunciation of English is different from that of the Indonesian language as their first language. English has low consistency of spelling and some segmental and suprasegmental phonemes of the language are totally new for non-native speakers [34]-[37]. This evidence supports the study of Tambunsaribu & Simatupang [9] who found that Indonesian students still have many difficulties in pronouncing English words.

Apart from the difficulties, surprisingly, the students faced a smaller problem in learning English pronunciation and can easily recognize the speech sounds of English. In this modern world with advanced technologies, it is simpler to learn the knowledge of pronunciation, including sound recognition than to acquire the more complex skill of sound production as stated by linguists [38]-[40]. This can explain why the students perceived themselves as more able and self-confident in grasping the sounds of English though, in fact, their productive skill level is felt less satisfactory. It is recommended that the students get into more production practice with problematic sounds of English for efficiency and a sense of accomplishment.

5.2. University Teachers' Practices in English Pronunciation Classrooms

Students reported that their English teachers never teach them English pronunciation. As stated earlier in the literature review, English teachers do not feel confident about how to teach English pronunciation. Many of them even face difficulties in pronouncing the language they teach. It is also noticeable from the data that teachers mostly use tape-player for teaching pronunciation and seem lowly involved in empowering technology-enhanced instructional facilities, like language laboratories, for example. Studies on language teachers' creativity in the use of media can help explain this fact.

Overall, language teachers in Indonesia have been struggling with educational technology, more specifically, instructional media use [41]. According to Adijaya et al. [42] creativity of the observed

teachers still exists within the level of self-perception. In practice, they seem to show low creativity in the use of teaching media. Likewise, language teachers remain technologically backward. They use conventional media and monotonous media in instructional practices. Indeed, there is a necessity for teachers of English to synchronize their perception with factual behavior in the classroom [43].

5.3. Students' Need for Media in Learning English Pronunciation

It is obvious that university students need more interesting and practical media to learn English pronunciation. The need is felt even greater in EFL context [44]. Practical media is of importance to improve productive or active language skills such as writing and speaking which also include mastering pronunciation [45]-[46]. Using more practical media like online English learning applications enables students to practice and get immediate feedback so that they know their learning progress [47]-[49]. The practice of pronunciation teaching and learning English should promote the utilization of educational technologies as modern media. Further, university teachers may promote active learning in the classroom by using a variety of learning media and resources, giving their students opportunities to practice pronouncing English words properly.

There is nothing shocking about the high need for the media to learn English pronunciation by students. With the fast advancement of educational technology, learners of English with varied personality backgrounds find it ridiculous to learn the pronunciation of English by merely listening to teachers who tend to rely on their own as one and the only source. Moreover, at present, technologies in language teaching and learning, such as Computer-Assisted Language Learning (CALL) or, more specifically, Computer-Assisted Pronunciation Training (CAPT) are developing very rapidly [50]. Students would love learning the pronunciation of English when it seems/sounds appealing and is far from mechanical drill and monotonous learning mode. Surely, as the condition can provide, they want to learn the pronunciation excitingly, practically, as well as effectively. That is why students are often keen on learning and practicing English through social media, for instance. Similarly, in connection to ways of learning pronunciation, it is most likely that students would love learning and practicing it using things like application best. Computer-based tools are reported to have helped either teachers or learners with the pronunciation aspect of English [50]. Pedagogically speaking, efforts of such have a firm theoretical foundation, where the use of selected technology tools allows the chance for the students to learn in a way that involves reflective activities like listening, recording, self-monitoring, and self-correcting to take place [8]&[52].

6. Conclusion

The investigation revealed that the university students consider English and its pronunciation aspect difficult to acquire although they value their English pronunciation as relatively good. Most students reported that their English teachers never teach them pronunciation in particular and reported that teachers mostly use an audio player for teaching pronunciation and seem lowly involved in empowering technology-enhanced instructional facilities. It is obvious that students need more interesting, practical, and effective media or, in other words, more modern media to acquire the English pronunciation. Evidence indicates that regarding their English pronunciation, students can be trained intensively with more modern media that enable them to acquire English pronunciation with ease and, therefore, it suffers no more from neglect (as in Cinderella story) in the English language teaching and learning. Despite the nature of the survey study to students with close-ended questions, this study offers some insights into the current state of teaching and learning pronunciation in high-er education in Indonesia. The next study may include open-ended items and invite wider perceptions from university teachers.

This study has limitations and future research agendas. First, it focused on surveying students in a single university. Thus, its results have smaller generalizability. Investigating the same issues in more than one university may raise the level of generalizability. Secondly, regarding the instrument employed in the current study, it contains close-ended questions. Further research that includes open-ended items is encouraged. Finally, this study concentrated on students' data, asking university teachers' perceptions could complement current findings from other perspectives.

Acknowledgement:

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