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Deep in the Diphthong Problem: A Study on Indonesian EFL Learners' Pronunciation Development and the Influence of Individual Differences

Terjebak dalam Masalah Diftong: Kajian Perkembangan Pengucapan Pembelajar EFL di Indonesia dan Pengaruh Perbedaan Individu

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Abstract

The current study aims at investigating the development of Indonesian EFL learners' pronunciation in terms of diphthong. In this study learners' pronunciation were observed over a period of six months to see how they develop. Moreover, the influence of their linguistic background on the pronunciation development was also measured namely age of acquisition, native language, level of English accent and the extend of English exposure. The data of this study was collected using pronunciation tests and the Language History Questionnaire (LHQ). The participants involved in this research were 25 university English students who were taking Phonetics course. The collected data was then analyzed using SPSS. The analysis techniques of this study were descriptive statistics and multiple regression analysis. The study found that the learners' diphthong pronunciation did not develop significantly. Moreover, it even tends to have downward trend. Finally, according to the regression analysis, the aspect of learners' linguistic background that affected the most on their pronunciation development was their exposure to English.

Keyword: *pronunciation, diphthong, EFL learners' development*

Abstrak

Penelitian ini bertujuan untuk menyelidiki perkembangan pengucapan pembelajar EFL dalam hal diftong. Dalam penelitian ini, pengucapan para pembelajar diamati selama enam bulan untuk melihat bagaimana mereka berkembang. Selain itu, pengaruh latar belakang linguistik mereka terhadap perkembangan pengucapan juga diukur, di antaranya usia pemerolehan, bahasa asli, tingkat aksen bahasa Inggris, dan paparan bahasa Inggris. Data penelitian ini dikumpulkan dengan

menggunakan sebuah tes pengucapan dan Language History Questionnaire (LHQ). Partisipan yang terlibat dalam penelitian ini adalah 25 mahasiswa bahasa Inggris tingkat universitas yang mengambil mata kuliah Fonetik. Data yang terkumpul kemudian dianalisis dengan menggunakan SPSS. Teknik analisis penelitian ini adalah statistik deskriptif dan analisis regresi berganda. Penelitian ini menemukan bahwa pengucapan diftong pembelajar tidak berkembang secara signifikan. Bahkan cenderung mengalami tren menurun. Terakhir, dalam hal perbedaan individu, menurut analisis regresi, aspek latar belakang linguistik pembelajar adalah yang paling mempengaruhi perkembangan pengucapan bahasa Inggris mereka adalah keterpaparan mereka terhadap bahasa Inggris.

Kata kunci: *pengucapan, diftong, perkembangan pembelajar EFL*

Pendahuluan

Pronunciation in language learning deals with sound production to deliver meaningful utterances in communication with the interlocutor. According to Hornby (2008, p. 352) "pronunciation is the way a language or particular word or sound is spoken". It becomes an essential skill to be mastered by second or foreign language learners. As Pennington and Rogerson-Revell (2019) stated, pronunciation is a feature of communication that is far more essential than is commonly understood. They also added that it is the fundamental skill for all spoken language because ideas must be expressed in sound to be heard and generate a message that can be communicated to the interlocutor. In addition, Harmer (2000) mentioned that language learners who are aware of pronunciation concerns will improve not only their production skill but also their understanding of spoken English such as listening skill.

Despite the importance of pronunciation skills in learning a foreign language, pronunciation learning still does not get enough attention. In Indonesia, teaching English is mainly focused on four skills; reading, listening, writing, and speaking. As Gilakjani and Sabouri (2016) stated that although English pronunciation has a significant influence on learners' successful communication, many teachers neglect it in preference to teaching grammar and lexis. As a result of this condition, many learners lack pronunciation knowledge. In addition, some studies have reported that EFL learners find that pronunciation is a difficult skill to be mastered, especially for adult learners. For example, Yates et al. (2009) stated that many adult learners consider pronunciation to be one of the most challenging parts of English to acquire, and they recognize the need for specific assistance from the start of their language learning.

In Indonesia, most EFL learners do not use English as their daily communication. Beside Indonesian, they mostly have a local language that they use on daily basis. Hence, these languages influence their pronunciation. According to recent study carried out by Rahman and Tralala (2021) and Saadah & Ardi (2020) the learners face a difficulty in pronuncing some diphthong and they tend to do monophthongization of the diphthongs [aɪ], [aʊ], [eɪ], [ɪə], [əʊ] and the replacement of the sounds [eɪ] and [ɪə] with other diphthongs. This

problem occured because of the influence of the mother tongue since some English diphthongs do not exist in Indonesian language.

Numerous studies have been conducted on pronunciation errors made by Indonesian learners. However, most of them only describe the errors produced by learners at a single period of time. Only a few of them focus on learners' pronunciation development, especially in the context of Indonesian learners and time series study. Understanding the learners' development in learning English as a foreign language is crucial in order to get a bigger picture. Some errors may occur at one time but not the others since learning a second language is usually an extensive process. As Mukherjee (2020) stated, recognizing the path learners take and, as a result, having clear objectives of what learners may achieve at given points along the developmental continuum is essential for both learners and teachers. In this study, the development will be discussed from a dynamic usage-based perspective. Dynamic Usage-Based is one of the development theories that was originally used in the mathematics field but then started being used in applied linguistics, particularly in language development (Aziez, 2021). Based on this theory, language is not only acquired as an innate ability but also through learners' experiences, motivation, aptitude, and many other factors that are interconnected in language acquisition.

Since learners' development is an extensive process and need repeated assessments to collect the data, time series study is suitable for this developmental research. According to Caruana et al. (2015), longitudinal studies use continuous or repeated assessments to examine specific individuals across certain periods. The survey that was conducted by Card and Little (2007) shows that 41% of published developmental research reported findings from longitudinal studies. In addition, they also stated that longitudinal data plays an important role in all developmental research methods. Therefore, from all of those rationales, the current study will focus on learners' pronunciation development, especially in terms of diphthong production.

Theoretical Review

According to Yates and Zielinski (2009), diphthongs are made up of two single vowels that are pronounced as one syllable by gliding from one vowel into another. It is essential to be understood that the first part of the diphthong is longer and more powerful than the second part (Wahyukti & Kusumastuti, 2020). The total number of diphthongs is eight and divided into two types; centering and closing diphthongs. A centering diphthong is the second vowel that is more centered than the first vowel because the movement of the tongue is carried out towards the central vowel (Dosia & Rido, 2017). Diphthongs that included in centering type are [Iə], [ɛə], and [uə]. On the other hand, a closing diphthong is a diphthong that ends with a glide towards a closer vowel (Roach, 2009). Closing diphthongs are [eI], [aI], [ɔI], [əu] and [au].

In describing the learners' development of diphthong, this study used the framework of dynamic usage-based approach. Langacker in Verspoor and Hong (2015) stated that a dynamic usage-based approach combines DST as it refers to language development in applied linguistics and usage-based theory in linguistic

theory (p. 26). Dynamic system theory is usually used in the mathematics field. However, Lunkenheimer (2018) explained that in the early 20th century, developmental researchers began using the DS Theory technique to analyze human development across the lifespan. She also added that a dynamic system is an open system, which means it is constantly having interactions with its surroundings and, as a result, reassembling new forms and patterns. In accordance with that theory, De Bot et al (2007) mentioned that most applied linguists will generally believe that SLA is a fundamentally complex process and that numerous elements such as motivation, aptitude, degree of input, and L1 are all interconnected and influence the L2 learning process

On the other hand, the usage-based approach has five essential principles as follows; (a). Language is primarily used for communication, and it develops as a result of that usage. (b). Natural language happens in context, and the speaker's choice in building an utterance is influenced by a variety of contextual circumstances and socio-cultural. (c). Language is learned. The idea that certain universal components of language structure are innate is denied. (d). the meaning of words is not conveyed simply in lexical elements. Grammatical patterns have significance on their own. (e). All aspects of language (syntax, semantics, pragmatics, morphology, phonology) contribute equally to the production of linguistic expressions (Tyler, 2010). In conclusion, according to the Dynamic Usage-Based (DUB) approach, language learning is a complex and dynamic process. It is not only an innate process but is also influenced by many factors. Those factors include learners' experience, language usage, and learners' linguistic background. Hence, language development depends on the use of the language itself. In this present study, the linguistic backgrounds are considered in measuring learners' pronunciation development.

There are many factors that affect pronunciation acquisition in learning a foreign language. Native language is the first factor that influences how learners speak a foreign language since every language has different sound systems. As Kenworthy (1987) stated that the more different it is, the more difficult it will be for the learners to pronounce a foreign language. For instance, there are some differences between English and Bahasa Indonesia. As a result, it is difficult for Indonesian learners to pronounce certain sounds in English such as sounds ð (either) and θ (think) which do not exist in Indonesian language.

The age of the learners affects pronunciation learning as well. According to Yoshida (2005), children absorb language sounds easier than adults and may approach English pronunciation if they are immersed in it and have numerous opportunities to hear it spoken. It means that foreign language learners can be native-alike if they start learning from a young age and still have exposure to the target language use. Hence, the amount of exposure to the target language also becomes the factor that affects pronunciation learning. The learners who live in English speaking country and use English as their daily language to communicate will learn pronunciation easier and faster rather than those who do not have much exposure to English.

Another factor that determines the learners' success in learning pronunciation is the method and quality of teaching. The learners who obtain

many trainings of pronunciation will get more exposure and chance to practice their pronunciation ability. The amount and quality of teaching learners have received have a significant impact on their learning (Yoshida, 2005).

Besides all those factors, the most important factor is motivation from the learners themselves. Despite many barriers to learning pronunciation, the learners can be successful in mastering a second or foreign language as long as they have the willingness to learn. Motivation usually comes from the goal that the learners have. Hence, it will be difficult for the learners if they do not know their purpose in learning a language. Furthermore, Kenworthy (1987) stated that learners may be unconcerned because they are unaware that how they communicate is causing difficulties, discomfort, or confusion for the listeners.

Research Methods

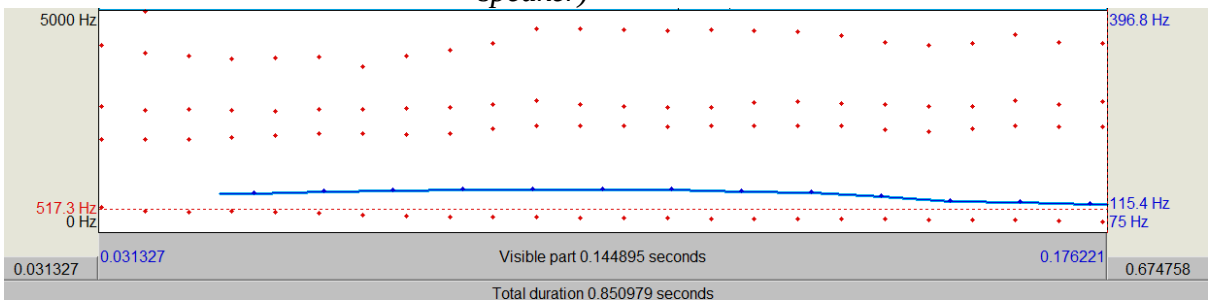
This study was conducted to investigate EFL learners' diphthong pronunciation development. Therefore, the researcher used a descriptive quantitative method to answer the questions. As Kothari (2004) explained that descriptive research is a study that deals with describing the characteristics of a specific person or a group of people. Thus, this research method is in accordance with the aim of this research that is to describe learners' pronunciation development. The participants of this study were 25 Indonesian EFL university students who have taken phonetic subject in the previous semester. As for the language background, most of the participants speak Javanese as their mother tongue and English as a foreign language. In addition, this research is a time series study. As Caruana et al. (2015) stated that time series studies use continuous or recurring assessments to track the progress of individuals in a certain length of time. They also added that this research design is very beneficial for determining the connection between variables and development. The individual differences of the learners were obtained using the Language History Questionnaire (LHQ3) from Li, et al. (2020) which has been translated into Indonesian. To assess the learners' pronunciation performance overtime, a pronunciation tasks were administered monthly over six months period. In each task, the learners were asked to read aloud a text which includes a set of English diphthong sounds. In analyzing learners' accuracy in pronouncing diphthongs, *Praat* software (Boersma & Weenink, 2022) was used. In this study, the pronunciation was assessed based on the formant results. Finally, in identifying the effect of individual differences on the learners' performance, multiple regression analysis was performed on selected traits including age of initial English acquisition, accent level, native language, and exposure of English.

Results

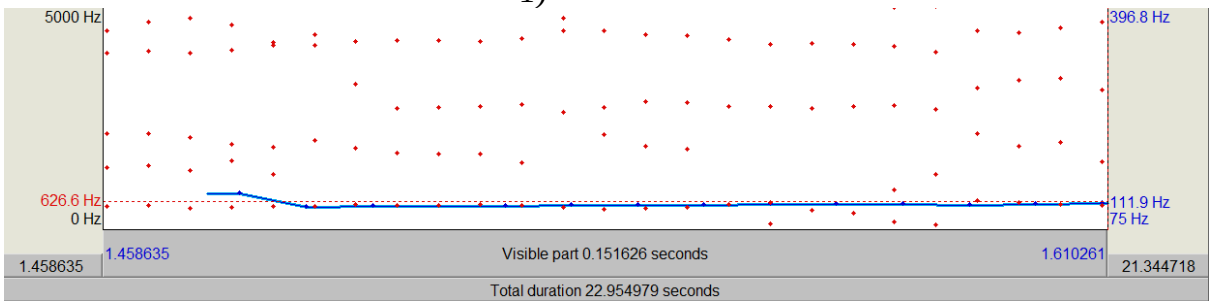
Learners' Diphthong Development

As mentioned in the previous section, in this study, the learners' pronunciation was assessed based on the formant results using *Praat* software. The formant reflects the place and manner of articulation of the diphthong. The figure below shows several examples of the outcomes of the analysis.

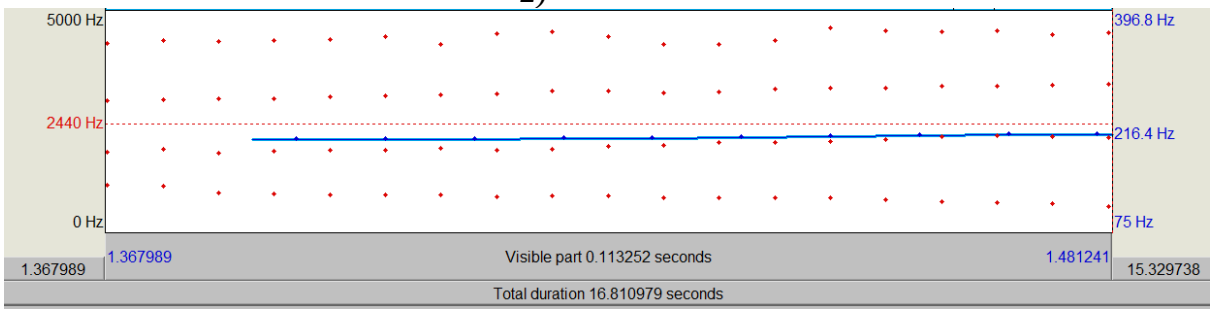
The result of Praat analysis of diphthong /eI/ from the word ancient (Native speaker)



The result of Praat analysis of diphthong /eI/ from the word ancient (Participant 1)



The result of Praat analysis of diphthong /eI/ from the word ancient (Participant 2)

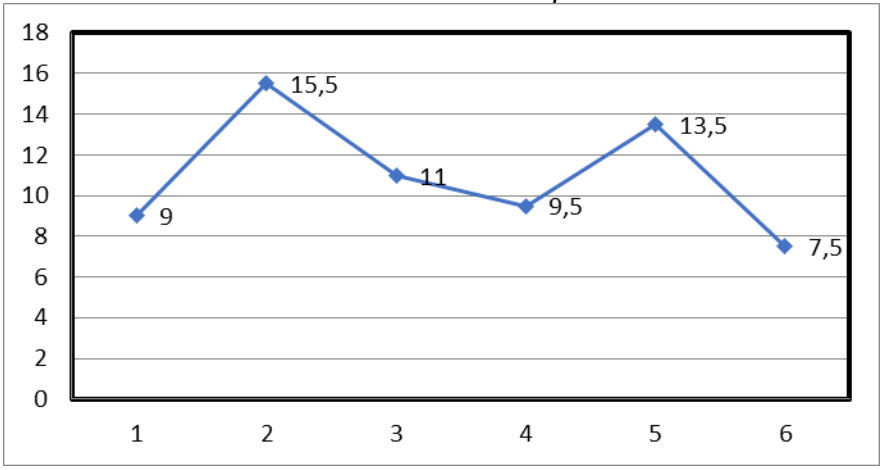


According to the figure above, the line in blue color is the pitch sound. The result of that analysis was compared to the pitch of native speaker pronunciation, obtained from the Cambridge online dictionary. Based on the analysis, the pitch of native speaker's sound recording was 115,4 whereas the pitch result of participant 1 was 111,9. That result is almost similar to native speaker's. It means that the first partcipant pronounced the diphthong correctly and almost perfect. On the other hand, the formant result of the second participant was 216,4 which is different from native speaker's result. It means the second participant did not pronounce the diphthong correctly.

In the current study, the learners' pronunciation development was assessed for six times in six months. The words that must be pronounced by the learners in each test were different. Furthermore, the position of the diphthong in each word varies among tests. Learners' pronunciation development wass calculated

statistically from the average score of each test result. While, the score was gathered from Praat analysis that is dicussed previously. As a result, the development is shown in figure below:

Pronounciation Development



In the figure, the x axis represents the pronunciation test session, while the y axis represents the average score test. It can be seen that there is a significant improvement from test one to test two. However, there is a slight decrease between the average score of tests three and four. Meanwhile, in test five, the average score increases but the sixth test average score is lower than the fifth.

Individual Differences

Whether or not there is an effect of those independent variables on learners' pronunciation can be seen from the significance result as shown in the table below:

Regression analysis

	t	*Sig*
Age of acquisition	-0,497	0,625
Accent level	-0,468	0,645
Native language	-0,257	0,800
Exposure of English	5,482	0,000

The result of the analysis indicates that only exposure to English has a significant influence on learners' pronunciation in terms of diphthong. The degree of significant regression is 0,000, which is less than the values (0,05) with an explained variance of 81%. It predicts that learners who are exposed to English in their everyday activities tend to enhance their diphthong pronunciation. Other variables, such as age of acquisition, native language, and accent level, may have no substantial effect on learners' pronunciation development since the significance of the regression analysis is more than 0,05.

Discussion

The results from the PRAAT analysis show that most students have difficulty pronouncing the sounds of English diphthongs. According to Donal (2016), the difficulty of diphthong pronunciation in the context of Indonesian learners happens because of the lack of understanding about the difference between the sound system of Indonesian language and English. He also stated that the pupils are unable to use borrowed English words. In this study, for example, the learners pronounced the word "identical" as Indonesian pronunciation, which is not pronounced as diphthong. They pronounce it as (IdentIkal) rather than (aI'dentIkl).

In addition, the developmental part of this study shows some fluctuation in the learners' pronunciation performance. It means that learners are inconsistent in pronuncing diphthong. It is in line with a previous study conducted by Rasaki et al. (2019), which discovered an inconsistency in pronouncing diphthongs that was caused by monophthongization. The similar result was confirmed in a previous study conducted by Derwing et al. (2005), which found no significant improvement in learners' pronunciation. The development of learners' diphthong pronunciation is nonlinear and tend to decrease over six months based on the graphic above. It is in line with one of the characteristics of the dynamic usage-based approach to language development. According to Verspoor and De Bot (2011) language development is a nonlinear process in a dynamic usage-based approach. The nonlinear process implies that a development changes continuously, sometimes discontinuously, and sometimes chaotically (Verspoor & De Bot, 2011).

Besides tracing the development of the learners, this study also seeks to identify which individual differences have significant impact on the learners' pronunciation performance. Using multiple regression analysis, the study tested several traits assessed through the LHQ. The results indicated that, of all of these factors, only exposure to English has a substantial effect on learners' pronunciation development. According to Yoshida (2005), although age of acquisition influences student pronunciation, it should be followed by the amount of exposure to the target language. A strong exposure to the target language will assist learners in acquiring a native-like level of pronunciation (Gilakjani 2012). Furthermore, based on DUB perspective, exposure and the use of language are the most important aspects of foreign language development (Aziez, 2021). On the other hand, other variables such as age of acquisition, learners' native language and their accent level of English might not influence significantly on their pronunciation development in terms of diphthong.

The age of acquisition as another predictor in this research may not influence learners' pronunciation development. It is in contrast with what Collier (1988) stated that age of acquisition is a significant variable in foreign language acquisition. However, there is also a previous study that found the negative significance of age of acquisition on learners' pronunciation proficiency. The recent study conducted by Ji (2021) found that there is no significant difference between early starters and late ones since most of them were generally placed at

the same level in terms of pronunciation. In this study, most participants learn English from primary school (around 6 to 11 years old), whereas the others acquire English in secondary school. Those who learned English earlier did not show a significant improvement in terms of diphthong pronunciation.

On the other hand, the accent level may not have a significant impact on participants' diphthong pronunciation as well. It is in line with the previous study that found that accentedness does not influence the intangibility of pronunciation (Derwing et al, 2005). They also added that those both aspects are partially independent. In this study, the information of the participants' accent levels was obtained through self-report. The data showed that the majority of learners (68%) have an average English accent and only 8% who have a strong accent, whereas the rest have lower than average level of English accent. However, there is no significant development of diphthong pronunciation for those who have a strong accent level. It can happen because of the variety of English accents that are used by the participants. Furthermore, Saito, et.al (2014) stated that learners might feel that they have reached their needs in terms of segmental features for their conversation in English with the interlocutor. It can happen since the participants do not have much opportunity to communicate using English to native speakers.

Finally, the mother tongue of participants in this study did not have a positive significance on their pronunciation development. As Dhillon (2016) stated that the native language may not influence much on learners' pronunciation. Most of the learners in this study speak Javanese as their native language, followed by 32% learners speak Indonesian language as their mother tongue. While the rest speak Malay and Sundanese. However, according to the questionnaire data, the majority of participants feel comfortable using Indonesian language in terms of speaking. As a result, their native language may not influence their diphthong pronunciation.

Conclusion

Based on the result and discussion that were elaborated in the previous chapter, it can be concluded that the development of learners' diphthong pronunciation is nonlinear and tend to decrease over six months. The participants are inconsistent in pronouncing diphthong. It can be seen that the pronunciation average score increased significantly in test two and decreased in test three and four. In test five it increased again, followed by the downward trend in the last test. The inconsistency happened because the participants still lack knowledge about sound production of English diphthong. Furthermore, they tend to perform monophthongization in pronouncing diphthong. In addition, based on the regression analysis, it can be concluded that it is only exposure to English that has significant influence on the development of learners' diphthong pronunciation. The more exposure they have the better they pronounce diphthong.

To sum up, the current study shows that there are still rooms for improvement for English pronunciation particularly in terms of diphthongs for EFL learners in Indonesia. Although the study may seem trivial, the persistent problems indicate that EFL teachers have an important task to do in improving the learners' ability in pronouncing English diphthongs. As this study suggested,

exposure has a significant influence on the learners' pronunciation ability which as many has pointed out that lack of exposure is one of the biggest issues in EFL learning. However, further studies still need to be carried out particularly in identifying the underlying problems of the learners' difficulties in pronouncing English diphthongs. Moreover, more practical pedagogical approach should be explored through experimental or classroom action research in search of the solutions to the diphthong problems.

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