

PHONOLOGICAL AWARENESS AND EFL LEARNERS' PRONUNCIATION

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ABSTRACT

Achieving intelligible pronunciation, though a very challenging endeavour, is the purpose for language learners, EFL learners, in particular. Assuming that phonological awareness is a non-negligible predictor, 80 multilingual English Department students of four different levels of proficiency participated in this study to verify the correlation between the participants' pronunciation and their phonological awareness and the effect of individual learner differences like language proficiency on the participants' performance for both variables. The Pearson Correlation, the paired (samples) t-test, and the ANOVA computations confirmed that 8.12% of the subjects' performance on pronunciation was attributable to their level of phonological awareness. The participants better performed on pronunciation though for this variable an insignificant difference in the participants' means was established across the groups. For the variable phonological awareness, a highly significant difference in the participants' means across the four groups was evinced. Therefore, phonological awareness develops in the EFL learners as their proficiency level increases but there is no cause-and-effect relation between phonological awareness and pronunciation.

Keywords: *Pronunciation, phonological awareness*

RÉSUMÉ

Atteindre une prononciation intelligible est très difficile, mais c'est l'objectif des apprenants en langues, en particulier ceux de l'Anglais langue étrangère (EFL). En supposant que la conscience phonologique est un prédicteur non négligeable, 80 étudiants multilingues du département d'anglais de quatre niveaux de compétence différents, ont participé à cette étude pour vérifier la corrélation entre leur prononciation et leur conscience phonologique ainsi que l'effet des différences individuelles des apprenants, comme la compétence linguistique, sur la performance des participants pour les deux variables. Le test de corrélation de Pearson, le test t pour échantillons appariés et L'ANOVA ont confirmé une corrélation de 8,12 % entre prononciation et la conscience phonologique. Les participants ont obtenu des meilleurs résultats sur la variable prononciation bien que pour cette variable la différence des moyennes n'est pas significative à travers les groupes. Cependant, la différence est très significative pour la variable conscience phonologique à travers les quatre groupes. Par conséquent, la conscience phonologique va chez les apprenants d'Anglais langue étrangère de pair avec la compétence, mais il n'y a pas de relation de cause à effet entre la conscience phonologique et la prononciation.

Mots-clés: *Prononciation, conscience phonologique*

1. INTRODUCTION

Pronunciation of spoken language and English in particular is an important skill (see Gilakjani, 2011 quoted by Liang-Chen Lin, 2014: 16). With good communication skills, learners are likely to be understood even if their production is erroneous in other areas. However, learners with bad pronunciation will be misunderstood, even though their grammar is perfect. The pronunciation deviation of a word sound may lead the listener to some other meanings. In this case, it is very much undoubtedly that it is not a proper communication (Pandya Disha Prashant, 2018:15). Some teachers and students complain about difficulties in speaking instead of unambiguously talking about pronunciation (Nation, 2009 quoted by Phan and Nguyen, 2023: 3630). The sound (that is, the phonology, or the pronunciation), brings the rest of language to life (Isabelle DARCY, 2018:13). For these reasons and many others, research in pronunciation is to be pursued to answer the question how EFL pronunciation can be improved. In this article, the investigator, into their thinking about fostering intelligible pronunciation, pinpoints phonological awareness. Skillful students in English pronunciation and teachers to be a good asset in promoting English pronunciation from high schools.

This research is to verify firstly the extent to which phonological awareness bears on EFL pronunciation and secondly if individual difference factors namely the length of exposure to English affects both the EFL learners' phonological awareness and pronunciation.

The study, apart from introduction, is organized in 3 points: the literature review includes insights into phonological awareness and EFL pronunciation. The research methodology deals with research questions and hypotheses, participants, instrument, and data processing techniques. The results, findings and discussion part tie together this research findings and the views in the literature review.

2. LITERATURE REVIEW

Phonological awareness is most commonly understood as one's sensitivity to, or explicit awareness of, the phonological structure of words in one's language. It is in short the ability to notice, think about, or manipulate the individual sounds in words (Joseph K. Torgesen and Patricia G. Mathes, 1998:2). Three domains of phonological knowledge or awareness are generally acknowledged, that is, segmental, phonotactic and suprasegmental (Kivisto-de-Souza, 2015:88).

A connection of language proficiency with phonological awareness is suggested in the sense that to every level of proficiency corresponds a different level of language awareness, phonological awareness included. In other words, there are degrees of language awareness/phonological awareness each of

which is an expression of a different level of language proficiency (Min Hu, 2019:45). With this view, an L2/target language learner moves from zero, low or superficial L2/target language phonological awareness gradually to more profound understanding of the L2/target language phonological features/system. It is then a continuum rather than a dichotomy zero or full/profound understanding of the L2/target language phonological system. In addition, different individuals may be situated at different levels of L2/target language language proficiency and L2/target language phonological language awareness. In other words, L2/target language learners differ in their L2/target language phonological awareness. It follows that there are as many degrees of L2/target language phonological awareness as degrees of L2/target language pronunciation there will be.

However, if L2/target language phonological awareness is considered to be based on proceduralized knowledge, the difficulty to reliably set the boundaries between degrees of awareness arises. For this reason, the present research investigates L2/target language phonological awareness as explicit knowledge and assumptions are made with reservation that the participants' correct phonetic/phonological production of which they cannot explain the correctness is glossed as based on proceduralized phonological knowledge.

Substantial discussion on the nature of L2/target language phonological awareness has focused attention in the preceding lines. Van Lier's (1998: 135, 137) view about language awareness for L2/target language phonological awareness as suggested by Kivisto-de-Souza (2015:105) seems to be most conclusive:

Language awareness is made up of two levels of linguistic knowledge [epilinguistic and metalinguistic], which are related to each other in intricate and dynamic ways ... the metalinguistic knowledge is the tip of a solid language awareness iceberg and plays a substantial role in language learning. However, if this tip is without such an iceberg underneath, it will be inconsequential and will dissolve without leaving a trace.

Proceduralized non-verbalizable knowledge makes up the majority of all L2/target language learners' L2/target language phonological awareness, which is the solid base of the imaginary iceberg whereas explicit verbalizable L2/target language phonological knowledge forms the tip of that imaginary iceberg and such knowledge is developed by less naïve phonetics and phonology instruction L2/target language learners. Variables other than formal instruction may affect L2/target language phonological awareness.

There are expectations that "higher degrees of L2/target language phonological awareness are characteristic of language users who use the L2/target language more and have been in contact with it longer. But language

users who have less L2/target language experience show low degrees of L2/target language phonological awareness." (Kivisto-de-Souza, 2015:107). Put in another way, individuals differ in the degrees of their language awareness based on their experience of and amount of exposure to the L2/target language.

Research by Kennedy and Trofimovich (2010: 171) indicates that a high number of studies about the effectiveness of pronunciation instruction and perceptual training, both of which based on the general idea of raising the learner's awareness of the target language phonology through explicit instruction, enhances L2/target language perception and production. Put differently, a correlation is said to exist between L2/target language phonological awareness and L2/target language pronunciation (Moh. Nurman, 2021:290). Kivisto- de-Souza (2015) encourages research about phonological awareness in adults learning a second (an additional) language since she noticed it is extremely scarce.

In a nutshell, individuals vary in their degrees of proficiency and phonological awareness as they vary in their experience in language use and amount of exposure to the L2/target language. Phonological awareness has potential to affect pronunciation.

3. METHODOLOGY

This point discusses the following sub-points: research questions, hypotheses, sample, instrument, data processing methods, and results and findings.

3.1. Research questions

Two research questions guide this research: 1) Do the EFL students' phonological awareness and their target language pronunciation correlate? 2) To which extent variation in phonological awareness and EFL pronunciation is dependent on the level of proficiency or language experience?

3.2. Hypotheses

In terms of verifiable assumptions, the above research questions tally with these hypotheses: 1) The higher the degree of the phonological awareness the EFL students have developed, the better their EFL pronunciation will be. 2) The difference in amounts of exposure to English has an impact on EFL students' output on the two variables under consideration in this investigation. In other terms, it is predicted that there will be a significant difference across the four groups of the sample in phonological awareness and EFL pronunciation on the test with the last group outperforming the first three others.

3.3. Participants

The participants of the investigation were a sample of students of English at the 'Institut Supérieur Pédagogique de Mbanza-Ngungu' (henceforth ISP Mbanza-Ngungu), a teacher training college in the 'Kongo Central', in the southwest of the Democratic Republic of Congo. The English Department students' population has increased from 50 to 150 in the last ten years. The present study targeted those students who are more naïve explicit phonetics and English phonology instruction, especially, 1st - year students. In addition, the study includes less naïve explicit phonetics and English phonology instruction participants who have completed their training in explicit instruction on phonetics and English phonology, that is, 4th - year students. 2nd - and 3rd - year students are in- phonetics and English phonology training-students but two different groups of participants whose progress in level of phonological awareness and pronunciation accuracy may be measured in comparison to other groups of this research participants. It goes without saying that the present research is a case study for the sample was selected from one institution, "The Institut Supérieur Pédagogique de Mbanza-Ngungu" and one department, the English Department.

All the population of the targeted classes did not participate but a sample of it was needed. About the sampling process, Onwuegbuzie and Collins (2007) have this to say:

Whether in quantitative and qualitative studies, researchers must consider the sample size or the number of participants to select and the sample scheme, how to select these sample members. To achieve the population representativeness, the sample size must be large enough because statistical significance, findings generalizability, and external validity requirements rely on it

For this purpose, the researcher selected 80 participants who furnished the research data. This size abides by Onwuegbuzie et al.'s (2004) recommendations. For them, they suggest 64 participants for one-tailed hypotheses and 82 participants for two-tailed hypotheses when it is about correlational research designs. The focal point in the following lines is the sample scheme.

For the purpose of generalizing the findings to the population from which the sample was drawn (i.e., make inference), the researcher selected a random probabilistic sampling. It is simple as it gives every individual in the sampling frame (i.e., the desired population) an equal and independent chance of being chosen for the study. Indeed, the population of a class was allotted each a number and a lottery draw helped to select an equal number of participants

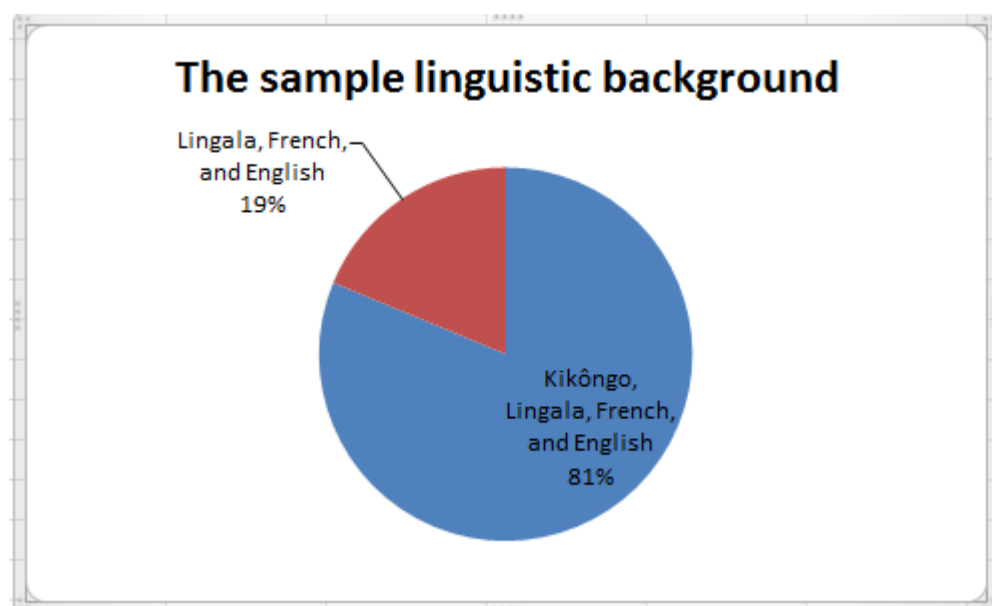
(20) for each of the four year-groups (the first-, the second-, the third-, and the fourth-year students) who represent four different levels of proficiency.

As can be seen in the distribution of the sample by groups, the researcher selected 20 participants to compose each of the four groups. Each group is a different level of proficiency. The first group of participants, that is, the first-year students are students who freshly embark on studies in an English department. At the time of the test administration, their background in English is an experience of four years of English at the secondary school with an average of three periods of fifty (50) minutes each per week. They constitute the most naïve explicit phonetics and English phonology instruction of all four groups of participants. The second group composed of second-year students is, in addition to the first group's background, accredited a level of proficiency of one year of English language study, in general, and explicit phonetics and English phonology instruction, in particular. The third group is that of third-year students who have had an explicit phonetics and English phonology training of two complete academic years. Finally, the fourth group of participants is made up of fourth-year students. The students of this year have covered all the time allocated to explicit phonetics and English phonology instruction. They are, thus, less naïve explicit phonetics and English phonology instruction participants. The participants are divided in two groups in terms of explicit phonetics and English phonology instruction received: the in-explicit phonetics and English phonology training participants, a group the most naïve explicit phonetics and English phonology are part of and the less naïve explicit phonetics and English phonology instructed or the participants after completion of explicit phonetics and English phonology training.

The participants' ages in the first group ranged from nineteen to forty-one with an average age of 22.7. Their ages varied from twenty to twenty-eight with an average age of 22.4 in the second group. In the third group, the ages ranged from twenty to thirty with an average age of 24.4. As for the fourth group, the ages spread from twenty-one to forty-five with an average age of 26.5 years.

The participants' linguistic background is as displayed in the following pie chart.

Figure 1: The participants' linguistic background



From the graph above on the participants' linguistic background, the researcher observed that all the participants are multilinguals but they make two groups: the first is one of the participants who speak Lingala, French, and English and represent 19 % of the sample and the second group representing 81 % of the sample includes the participants with the linguistic background of four languages, Kikôngo, Lingala, French, and English. It must be noted that the investigation took place in a Kongophone area but 19 % of the sample do not speak Kikôngo. As a reminder, the average of the average ages of the sample is 24. Kikôngo risks becoming an endangered language in the years to come as younger generations have the tendency not to use it. However, there is no way to ascertain that they are with zero knowledge of Kikôngo. Lingala, on the other hand, appears to be the language of the youngsters throughout the Democratic Republic of Congo and especially in its western part. French and English are compulsory languages and subjects for those who go to school. The participants' own estimates of languages uses in percentage run as follows: twenty participants, the highest frequency representing 25% of the sample, reported that they use English at 50% in their lives. Nineteen participants, that is, 23.8% of the sample, the highest frequency, indicated that their use of French is at 70%. Seventeen participants or 21.3% of the sample and the highest frequency reported that they utilise Lingala at 80%. Fifteen participants or 18.75% of the sample stated that they never use Kikôngo. In addition, 10 participants representing 12.5% acknowledged that they use Kikôngo at 10% and 10 other participants were observed to use Kikôngo at 20%.

The participants specified three contexts of the English language daily use with the time scale as follows: the widest portion of the sample, 29 participants or 36.3% of the sample use English at university in the span of 4-6 hours; 47.5% of the sample or 38 participants use English in their contacts with friends in the time scale of 1-2 hours; and 42 participants or 52.5% of the sample do not use English at home, however, 29 participants or 36.3% of the sample use English in the time scale of 1-2 hours. Overall, English remains a school subject, that is, it is only most used at school with the consequence that learning opportunities are rare outside school.

3.4. Instrument

The researcher presents in this section the instrument and the way it was used in the process of data collection. The instrument used in this research comprised two parts: the subjects' personal data and a test. The former provided the researcher with information on each participant's name, sex, age, year of study, and languages they currently spoke. This much personal data was deemed necessary for the researcher to avail themselves of many different variables that could support the explanation of some phenomenon in the course of the investigation results analysis and interpretation.

The second part of the instrument was made up of many sub-parts. Firstly, the participants were presented with 45 monosyllabic words orthographically and asked to indicate the number of sounds each word contained. The majority of those words display graphemes of at least two letters which stand for one sound. As can be noticed, the purpose of this task was to ascertain the participants make a clear difference between letters and sounds. Secondly, 50 words were presented on a sheet of paper for each participant to pronounce. The fifty words are a half supposed to be known by learners of the tertiary education and another half comprises words of low frequency of occurrence in speech. Afterwards, the participants were asked to list the words they were sure to know out of the fifty. This task was assigned to assess accuracy of segments production and correct stress placement other than the participants' awareness about their correct pronunciation. Thirdly, 245 phonemic transcriptions representing monosyllabic words and nonwords containing initial clusters were presented to the participants who were asked to sort out English words and nonwords. The latter were to be divided between the ones with permissible consonant clusters in English and those with impermissible consonant clusters in English. The task tapped into the participants' phonotactic awareness. Moving fourthly to the prosodic awareness, the participants were presented with five utterances which can be pronounced either with the falling or with the rising intonation. The stimulus was to tell the implication behind the use of either of the two types of intonation. In addition, the participants were presented two situations for them to decide on the nucleus stress placement in the sentences as dictated by the context. Fifthly, the

participants were assigned some tasks to elicit their frequency of the target languages use for the researcher to avail themselves of evidence whether language use impacts phonological awareness or not. Last but not one, the participants were asked to conduct a cross-linguistic comparison of this research target languages at the segmental and phonotactic level. Finally, an opinionnaire attempted to identify the participants' perception and production difficulties of English. In fact, the likert scales or gradable questions are used as a technique for measuring the participants' opinions on a number of issues in this research. These are the frequency of languages use and the difficulty of perception and production of segments and intonation imposed on learners by foreign languages in learning their pronunciation. The researcher sustains that this instrument is appropriate to collect data which will help understand satisfactorily the relationship between the participants' phonological awareness and their target language pronunciation in a multilingual context.

Apart from the opinion poll about which researchers draw conclusions indicating the general tendencies, the instrument elicited 412 answers. The participant was accredited 1 mark for each correct answer except for the right answers on the prosodic awareness which earned the participant 2 marks for the correct interpretation of both the falling and rising intonation and 2.5 marks for each answer with a correct nucleus stress use. All in all, the test was scored out of 420 marks. However, for the ease of processing, the investigator found it appropriate to convert each participant's scores to 10 marks.

The participants had to sit for the test in the same conditions on their campus site. It took place from November 23rd to November 26th, 2022. Additionally, the researcher invigilated the subjects themselves to make sure that the internal validity of the test was guaranteed. About the conditions for administering a test, Cohen (1980:33) indicates that "there are various procedures for administering a test." He goes on to point out that "to an average-sized class (e.g.: 20 to 30), a test may be administered in a classroom, or it may be given in a large students' hall". So, all the participants sat for the test at the same time and in the same conditions.

The test was printed on seven pages. Each participant received their own copy of the test. The instructions were clear enough so that all the participants were able to take part in the test. In their effort to make sure the participants understood what they had to do, the researcher even provided an illustrative question. In addition, they explained in French the motivation of the study and the requirement for participants not to cheat in performing the tasks. It was argued earlier that the results of the study would help draw conclusions likely to enhance language learning/teaching and language production in improving practices in students' training. In addition, the test results were kept confidential and success or failure in the test had no impact on the participants' academic year final evaluation. Furthermore, the researcher promised to offer

a coke to the participants after the test and did it. All these incentives aimed to obtain the participants' optimal involvement and remove anxiety from them.

Moving to the recording of the participants' pronunciations, the Adobe Audition 1.5. rar computer downloaded application was used. This material is so sensitive and faithful in sound recording that it is part of equipment music recording studios employ. The sample groups came for the recording each on a different day and the participants passed on turn. The instruction was simple. A participant had to hold the microphone, adjust it appropriately to their mouth, and read the fifty words printed size 16 they were presented with on a sheet of paper. Afterwards, they had to identify from the list the words they were sure they know. As aforementioned, the researcher collected this data from November 23rd, to November 26th, 2022.

3.5. Data presentation and processing techniques

The table that follows presents the collected numerical data. Each value is a subject's score out of 10.

Table 1: Tabulated quantitative data

| SUB. | Pronunciation scores | Segmental Awareness | Phonotactic awareness | | | | Prosodic awareness | Specific sounds, consonant clusters and common sounds, consonant clusters identification awareness |
|------|----------------------|---------------------|-----------------------|------|------|------|--------------------|--|
| | | | W | LNW | ILNW | Σ X | | |
| G101 | F 5.45 | 8.44 | 2 | 0.99 | 3.28 | 2.09 | 2.5 | 2.22 |
| G102 | 5.55 | 8.9 | 2.67 | 7.21 | 10 | 6.62 | 2.5 | 2.22 |
| G103 | 4 | 3.33 | 2 | 4.56 | 6 | 4.18 | 0 | 2.22 |
| G104 | 7.5 | 10 | 0.33 | 0 | 10 | 3.44 | 5 | 2.44 |
| G105 | 6.84 | 10 | 0 | 4.37 | 4.21 | 2.86 | 0 | 2.22 |
| G106 | 5 | 1.33 | 0 | 3.97 | 5.15 | 3.04 | 2.5 | 2.22 |
| G107 | 5.5 | 3.33 | 4 | 4.1 | 8.6 | 5.57 | 0 | 2.89 |
| G108 | F 6.5 | 4.22 | 0.67 | 5.9 | 7.81 | 4.8 | 0 | 0 |
| G109 | 5 | 9.33 | 2.33 | 8.21 | 9.84 | 6.8 | 5 | 2.22 |
| G110 | F 4.54 | 8 | 10 | 0.07 | 0.15 | 3.4 | 0 | 0 |
| G111 | 6.5 | 9.56 | 0 | 9.86 | 10 | 6.62 | 2.5 | 2.22 |
| G112 | 5 | 6.22 | 6.66 | 2.45 | 6.56 | 5.22 | 5 | 2.22 |
| G113 | 5.33 | 0.22 | 0 | 0 | 0 | 0 | 2.5 | 2.22 |
| G114 | 5 | 4 | 0 | 0 | 0 | 0 | 5 | 2.22 |
| G115 | F 5.5 | 8.44 | 0 | 0 | 0 | 0 | 0 | 2.22 |
| G116 | 5.29 | 4.44 | 0 | 2.64 | 9.84 | 4.16 | 0 | 0 |
| G117 | F 0 | 6.22 | 0.66 | 1.72 | 8.9 | 3.76 | 2.5 | 1.11 |
| G118 | F 5 | 4 | 4.33 | 3.84 | 9.06 | 5.74 | 2.5 | 3.33 |
| G119 | F 4.37 | 4 | 0.7 | 6.42 | 4.37 | 3.83 | 2.5 | 2.22 |
| G120 | 5.26 | 3.33 | 2.7 | 3.64 | 8.6 | 4.98 | 2.5 | 1.11 |
| G201 | 4.5 | 5.77 | 5 | 5.69 | 7.18 | 5.95 | 2.5 | 2.66 |
| G202 | 6.5 | 8.88 | 0.33 | 6.95 | 8.59 | 5.29 | 0 | 2.22 |
| G203 | F 5.55 | 0.88 | 0 | 2.98 | 8.59 | 3.85 | 2.5 | 2.66 |
| G204 | F 6.25 | 2.22 | 3 | 2.58 | 5.46 | 3.68 | 2.5 | 0 |
| G205 | 5 | 0 | 0.66 | 5.82 | 0.31 | 2.26 | 2.5 | 2.88 |
| G206 | F 2.77 | 0 | 0.66 | 5.62 | 0.46 | 2.24 | 4.5 | 2 |
| G207 | 5.5 | 0.22 | 0.66 | 0.59 | 1.71 | 0.98 | 5.4 | 3.33 |
| G208 | 4.5 | 8 | 3.66 | 9.07 | 8.75 | 7.16 | 0 | 6 |
| G209 | 5.29 | 5.77 | 7 | 0.86 | 1.71 | 3.19 | 2.5 | 4.22 |
| G210 | 5 | 0.22 | 2.66 | 6.02 | 7.81 | 5.49 | 5 | 3.33 |
| G211 | F 6.87 | 2.44 | 4.33 | 1.39 | 9.55 | 5.09 | 1 | 0.88 |

| SUB. | Pronunciation scores | Segmental Awareness | Phonotactic awareness | | | | Prosodic awareness | Specific sounds, consonant clusters and common sounds, consonant clusters identification awareness |
|------|----------------------|---------------------|-----------------------|------|------|------------|--------------------|--|
| | | | W | LNW | ILNW | ΣX | | |
| G212 | F 5 | 0.22 | 4 | 1.78 | 6.71 | 4.16 | 2.9 | 0.44 |
| G213 | F 6.5 | 4.44 | 0 | 5.43 | 5.46 | 3.63 | 2.5 | 2.22 |
| G214 | F 4.5 | 6.22 | 3.33 | 2.71 | 3.28 | 3.1 | 0 | 2.22 |
| G215 | F 6 | 8.44 | 0 | 2.31 | 9.06 | 3.79 | 2.5 | 0 |
| G216 | F 4.76 | 0 | 5 | 2.45 | 6.09 | 4.51 | 2.9 | 1.77 |
| G217 | F 4.44 | 0.66 | 1 | 1.98 | 7.5 | 3.49 | 2.5 | 2.44 |
| G218 | 0 | 5.55 | 0 | 7.88 | 8.43 | 5.43 | 2.5 | 4 |
| G219 | 5 | 0 | 3.66 | 4.17 | 8.75 | 5.52 | 0 | 3.11 |
| G220 | 3.5 | 0.22 | 8 | 2.78 | 2.96 | 4.58 | 0 | 0.88 |
| G301 | 5.5 | 8.44 | 1 | 9.33 | 10 | 6.77 | 2.5 | 0.44 |
| G302 | 8 | 8.88 | 6.66 | 4.63 | 4.84 | 5.37 | 3.3 | 2.22 |
| G303 | 4.5 | 1.55 | 6.66 | 3.04 | 3.28 | 4.32 | 0 | 2.22 |
| G304 | 6 | 0.66 | 3 | 1.72 | 1.71 | 2.14 | 3.5 | 1.11 |
| G305 | 7 | 8 | 3.66 | 3.64 | 8.59 | 5.29 | 5 | 4.44 |
| G306 | F 3 | 0.22 | 4 | 6.42 | 5.15 | 5.19 | 2.5 | 2.22 |
| G307 | F 5 | 0 | 3 | 5.16 | 6.56 | 4.9 | 2.5 | 1.77 |
| G308 | 5 | 2.44 | 0 | 8.21 | 8.9 | 5.7 | 4.5 | 5.11 |
| G309 | 7.5 | 9.55 | 6 | 8.34 | 10 | 8.11 | 7.5 | 4.88 |
| G310 | F 6.42 | 3.11 | 0.33 | 5.69 | 7.81 | 4.61 | 6 | 3.11 |
| G311 | 6 | 7.33 | 9 | 0.66 | 2.81 | 4.15 | 6 | 2.66 |
| G312 | F 5.5 | 1.33 | 5.33 | 2.38 | 3.28 | 3.66 | 3 | 2.44 |
| G313 | 5.88 | 7.11 | 9.33 | 0.86 | 1.71 | 3.96 | 3.5 | 2.22 |
| G314 | F 4 | 2.66 | 4.66 | 3.17 | 4.84 | 4.22 | 4 | 0.35 |
| G315 | F 5 | 0.22 | 0.66 | 2.84 | 7.5 | 3.66 | 0 | 2.44 |
| G316 | 5 | 0.44 | 6.33 | 4.43 | 3.9 | 4.88 | 5 | 2.88 |
| G317 | 5.5 | 0 | 1.33 | 3.7 | 3.28 | 2.77 | 1 | 2.88 |
| G318 | F 6 | 3.11 | 0.33 | 5.82 | 7.81 | 4.65 | 5 | 3.55 |
| G319 | 6.5 | 9.11 | 0.33 | 3.64 | 10 | 4.65 | 0.5 | 2.44 |
| G320 | 0.5 | 9.11 | 0.33 | 8.47 | 9.06 | 5.95 | 4 | 4.88 |
| G401 | 5 | 9.33 | 8 | 4.1 | 9.37 | 7.15 | 6 | 3.55 |
| G402 | 5 | 0.44 | 1 | 1.05 | 4.21 | 2.08 | 2.5 | 3.33 |
| G403 | 8.5 | 9.33 | 3.33 | 9.2 | 9.21 | 7.24 | 5 | 2.66 |
| G404 | 5.88 | 8.22 | 8 | 0.52 | 8.28 | 5.6 | 4.5 | 3.33 |
| G405 | 5.29 | 0 | 5.66 | 4.5 | 8.59 | 6.25 | 2.5 | 0 |
| G406 | F 5.5 | 6.22 | 1.33 | 0.33 | 9.68 | 3.78 | 2.5 | 7.77 |
| G407 | 6.5 | 9.11 | 2 | 6.95 | 8.43 | 5.79 | 6.5 | 5.11 |
| G408 | 6.5 | 8.66 | 2 | 9.53 | 9.37 | 6.96 | 3.5 | 2.22 |
| G409 | 6.8 | 9.55 | 8 | 3.11 | 4.37 | 5.16 | 7 | 6.22 |
| G410 | 5.5 | 9.33 | 10 | 0.92 | 1.71 | 4.21 | 5.5 | 1.77 |
| G411 | F 5.5 | 7.55 | 3.66 | 2.31 | 3.12 | 3.03 | 0 | 1.77 |
| G412 | 5 | 0 | 2 | 4.7 | 7.03 | 4.57 | 2.5 | 1.33 |
| G413 | 6.31 | 2.22 | 5 | 6.22 | 7.65 | 6.29 | 3 | 3.33 |
| G414 | 6 | 0.44 | 1.33 | 5.03 | 9.84 | 5.4 | 3 | 6.22 |
| G415 | F 3 | 0 | 5.33 | 0.72 | 2.65 | 2.9 | 0 | 1.33 |
| G416 | 4.5 | 0.44 | 0.66 | 5.69 | 5.31 | 3.88 | 2.5 | 3.77 |
| G417 | 7.05 | 3.33 | 3.66 | 5.82 | 9.06 | 6.18 | 5 | 3.77 |
| G418 | 5.9 | 0 | 3.33 | 5.23 | 7.81 | 5.45 | 7.5 | 6 |
| G419 | 5.29 | 0.66 | 3 | 7.88 | 6.4 | 5.76 | 3 | 4.22 |
| G420 | 5 | 8.88 | 5.33 | 8.6 | 5.46 | 6.52 | 10 | 4 |

SUB.: SUBJECTS

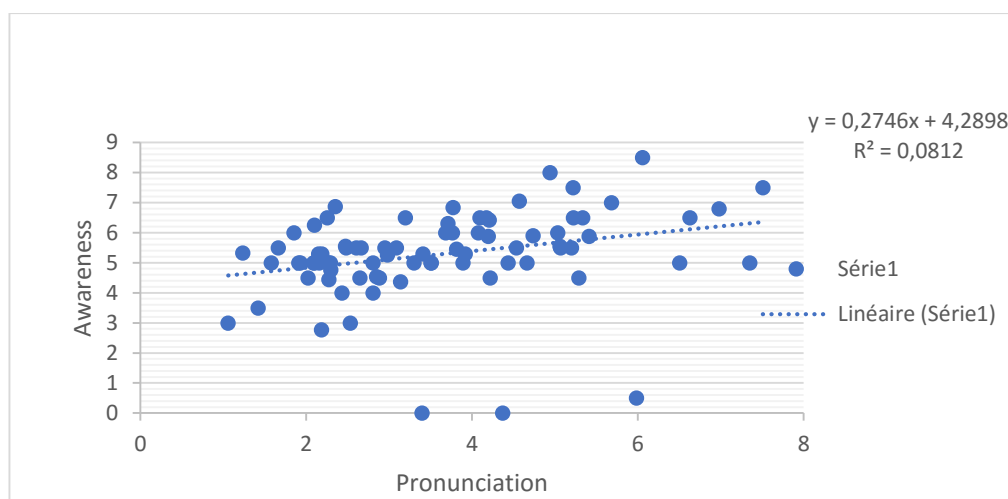
Descriptive statistics involved a data processing and an analysis of central tendencies, the mean, and the dominant tendencies that cover the average of

the participants' responses to the test. To the other side, inferential statistics deals with inferences about the true difference in the population as reflected by the sample data. To this purpose, the researcher employed three main statistical tests: the Pearson Product-Moment Correlation Coefficient, the paired (samples) t-test, and the one-way analysis of variance (ANOVA).

4. RESULTS, FINDINGS AND DISCUSSION

The Pearson Product-Moment Correlation Coefficient computation results are $r = 0.284956137$, $r^2 = 0.0812$ or 8.12 %. This amounts to saying that there existed a relation between the two variables. It is interpreted as 8.12 % of the participants' performance on pronunciation is attributable to their level of phonological awareness. As can be seen, this correlation is a strong negative relation between the variables. This evidence transpires from the scatterplot of the participants' scores on pronunciation and phonological awareness.

Figure 2: Scatterplot of participants' scores on pronunciation and phonological awareness



The correlation is not high enough to be stated to exist statistically. Such being the case, the null hypothesis (H_0) is maintained, the relationship does not exist between the dependent variables, phonological awareness and pronunciation. The alternative hypothesis (H_1) is, thus, rejected. The paired (samples) t-test results, bilateral t-test (pronunciation mean = 5.27925, awareness mean = 3.63384, $df = 79$, t value = 8.19498, sign. = 0.000) that revealed a highly significant difference between pronunciation and phonological awareness in the participants' output is additional evidence that the participants better performed on one variable, that is, pronunciation.

According to the second hypothesis, it was assumed that the difference in amounts of exposure to English impacts the EFL students' output on the two variables under consideration in this investigation. Put differently, it is predicted that there will be a significant difference across the four groups of the sample in EFL phonological awareness and EFL pronunciation on the test with the last group outperforming the first three others. The one-way analysis of variance (ANOVA) helped test out this hypothesis. The ANOVA result for the variable pronunciation ($F = 1.176$, $df = 76$, $Sig. .325$) revealed an unimportant difference in the participants' means across the four groups. The conclusion was drawn that the second hypothesis is disconfirmed for the variable pronunciation. The participants exhibit pronunciation difficulties to the same extent across the four levels of study. As for phonological awareness, another dependent variable, the statistical computation was conducted by means of the ANOVA. The result ($F = 3.816$, $df = 76$, $Sig. .013$) is tantamount to saying that the second hypothesis is maintained for this variable. There is a highly significant difference in the participants' means across the four groups. The fourth group with the highest mean (4.4000) outperformed the first three groups. In addition, explicit instruction on phonetics and English phonology aims among other purposes to foster phonological awareness in the learners which, as it is always assumed, will impact pronunciation. Based on the ANOVA results for pronunciation and phonological awareness, the investigator argues that the length of exposure to explicit instruction on phonetics and English phonology has an effect on the development of phonological awareness but does not have a cause-and-effect relation with pronunciation. In other words, the second hypothesis is maintained for the variable phonological awareness but invalidated for the variable pronunciation.

This study has provided evidence for a strong negative relation between the multilingual participants' phonological awareness and their EFL pronunciation. The participants' output in pronunciation was better than that in phonological awareness. The other finding is that the difference between the four groups of proficiency is highly significant for the variable phonological awareness but unimportant for the variable pronunciation. Such findings are in line with Van Lier's (1998: 135, 137) view about language awareness for L2/target language phonological awareness as suggested by Kivisto-de-Souza (2015:105). Language learners and EFL learners in particular can verbalize their metalinguistic knowledge, the tip of the imaginary iceberg. The epilinguistic knowledge, the invisible part of the iceberg is proceduralized, non-verbalizable but it is with significant effect on pronunciation.

Proceduralized non-verbalizable knowledge makes up the majority of all L2/target language learners' L2/target language phonological awareness, which is the solid base of the imaginary iceberg whereas explicit verbalizable

L2/target language phonological knowledge forms the tip of that imaginary iceberg and such knowledge is developed by less naïve phonetics and phonology instruction L2/target language learners. The L2/target language learner possesses more phonological awareness than they can verbalize. It is, thus, tenable a lot of the learner's correct pronunciation is fostered by proceduralized non-verbalizable phonological knowledge. Given that the difference in the participants' means for the variable phonological awareness is highly significant, it is arguable explicit instruction on phonetics and English phonology affects the participants' phonological awareness discriminately according to different levels of proficiency to maintain "there are degrees of language awareness/phonological awareness each of which is an expression of a different level of language proficiency" (Min Hu, 2019:45).

5. CONCLUSION

Pronunciation is critical to language (L1, L2 or foreign) learning. In researching how L2/target language learners can achieve intelligible pronunciation, this study examined phonological awareness as a predictor. It was established that the participants performed better in pronunciation due the fact that a lot of pronunciation output is fostered by proceduralized non-verbalizable phonological knowledge. Explicit instruction on phonetics and English phonology develops in learners' degrees of explicit/verbalizable phonological awareness varying in accordance with degrees of language proficiency.

This information will be useful to researchers and language learners, teachers, and other participants in language learning/teaching, in particular, to promote the teaching of pronunciation.

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