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Exploring the Relationship between the Use of Pronunciation Learning Strategies and Pronunciation Accuracy at the Segmental Level : The Case Study of First Year EFL Learners at Mohammed Seddik Ben Yahia University –Jijel.

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.

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DEDICATION

I dedicate this work to:

the light of my life and the apples of eyes, my parents;

my beloved brother "Ahmed" and my sister "Nawel";

my niece "Ritadj" and my nephew "Tadjou";

my special friends "Mina" and "Houra";

and all my family and my friends.

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Abstract

Research into language learning strategies has offered conclusive results about the role of strategy use in achieving success in second language acquisition. However, little is known about the role of strategy use in relation to pronunciation ability in general and pronunciation accuracy in particular. Based on this consideration, this study aims to shed light on the use of pronunciation learning strategies and its relationship with pronunciation accuracy at the segmental level. To meet this objective, a pronunciation learning strategy questionnaire and a pronunciation elicitation task were adopted and implemented with 28 first year EFL learners at Mohammed Seddik Ben Yahia University. Following a quantitative approach to data collection and analysis , it is hypothesized that there is a relationship between the overall use of pronunciation learning strategies and pronunciation accuracy at the segmental level; more precisely, the use of pronunciation learning strategies is more frequent with the students with higher accuracy levels .The findings of this study show that first year EFL learners employ pronunciation learning strategies at a medium level of use, with a preference towards the use of affective and cognitive strategies. Besides, the findings show that while memory and compensation strategies were more frequently used by students with lower levels of accuracy, the affective strategies were more frequently applied by students with higher levels of accuracy. However, no relationship was found between the overall use of pronunciation learning strategies and pronunciation accuracy. It can be concluded, then, that the affective side of learning has a vital role in successful pronunciation attainment.

List of Abbreviations

EFL: English as a **F**oreign **L**anguage

SLA: Second **L**anguage **A**cquisition

GA: General **A**merican

LFC: Lingua **F**ranca **C**ore

LLS: Language **L**earning **S**trategies

PLS: Pronunciation **L**earning **S**trategies

RP: Received **P**ronunciation

(*r*) : Pearson **P**roduct -**M**oment **C**oefficient

SLA: Second **Language A**cquisition

SPSS: **S**tatistical **P**ackage of **S**ocial **S**ciences

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1. Introduction

It is becoming increasingly undeniable that living in today's interconnected world urges the need for undertaking the daunting task of learning English as a second or a foreign language. Beyond doubt, the advent of communicative language teaching approach, which renovated foreign language teaching profession in the 1980's, has accentuated the notion of communicative competence as the primary driving purpose for foreign language teaching and learning. Arguably, one indispensible constituent of successful oral communication is intelligible pronunciation (Celce-Murcia, Goodwin & Brinton, 1996; Morley, 1991). Pronunciation, as stated by Fraser (2000), "is the aspect that most affects how the speaker is judged by others and how they are formally assessed in other skills" (p. 7). Accordingly, poor pronunciation is detrimental to the success of foreign language learners' oral performance "no matter how excellent and extensive their control of grammar and vocabulary might be" (Celce-Murcia et al., 1996, p. 7).

Building upon an anecdotal observation, pronunciation is also the skill that foreign language learners are seemingly eager to master by assuming that their pronunciation ability would mirror their general level in the target language. Unfortunately, pronunciation "is the aspect of language that is most difficult to acquire" (Fraser, 2000, p. 7). Given the difficulty of learning foreign language pronunciation in general and the diversity of English sound system in particular, first year students of English as a foreign language (EFL) typically strive to achieve an accurate production of consonants and vowels in their speech. Needless to say, in parallel with the scant time allocated to pronunciation instruction, EFL students' pronunciation learning is additionally impaired with the lack of exposure to native like models. Therefore, binding the learning of foreign language pronunciation to the confines of EFL classes is inefficient; instead,

learners are invited to bolster their autonomy in their challenging course of pronunciation learning. Accordingly, the use of learning strategies, as a hallmark of self directed learning, may have a significant role in EFL learners' pronunciation accuracy.

In the study at hand, pronunciation learning strategies (PLS) refer to the behaviors and actions that EFL learners intentionally and regularly use as part of their autonomous learning of English pronunciation. Besides, pronunciation accuracy refers to the accurate production of English consonants and vowels; that is, the accurate pronunciation at the segmental level.

The impetus for conducting the current study, then, is firstly to cast light on the use of pronunciation learning strategies in the Algerian context, more precisely, by first year EFL Licence students of Mohammed Seddik Ben Yahia University, jijel. Subsequently, this study will probe into the relationship between the use of pronunciation learning strategies and pronunciation accuracy at the segmental level.

2. Background of the Study

Since the mid-seventies, research into language learning strategies has gained popularity within second language acquisition (SLA) body of research. Nevertheless, a handful of studies investigated the relationship between the use of pronunciation learning strategies and the different aspects of pronunciation ability.

In 2007, pronunciation learning strategy literature ramified with Eckstein's study. Whereas previous research has focused solely on reporting the strategies the learners use in their pronunciation learning (i.e. Peterson, 2000) (as cited in Eckstein, 2007, p. 2), Eckstein's study was the first in nature to investigate the correlation between pronunciation learning strategy use and spontaneous English pronunciation. In his study, Eckstein (2007)

conducted a survey, where he administered a strategic pronunciation scale to 183 adult learners of English as a second language (ESL). Besides, a standardized speaking level achievement test was used to assess the subjects' pronunciation proficiency. The findings of this study revealed a significant correlation between the use of certain pronunciation learning strategies and higher scores of pronunciation proficiency namely, noticing other's English mistakes, asking for pronunciation help, and adjusting facial muscles. Moreover, another finding of the study showed that higher pronunciation scorers use pronunciation learning strategies more frequently than lower pronunciation scorers.

In another study, Berkil (2008) investigated the relationship between pronunciation learning strategy use and pronunciation ability. As far as the data collection is concerned, a pronunciation learning strategy inventory was administered to 40 students of English language and literature department at Dumlupmar University in Turkey. Additionally, the subjects' pronunciation ability was assessed via two pronunciation elicitation tasks namely, a read aloud task and extemporaneous conversations. Unlike Eckstein's (2007) study, the data analysis revealed no significant relationship between the use of pronunciation learning strategies and pronunciation ability. The analysis of the data at the individual strategy item level, however, showed that only three out of fifty two items varied significantly by proficiency levels.

In 2012, Rokoszewska investigated the influence of pronunciation learning strategies on mastering English vowels by first year students of the English department in Poland. As far as the result of this study is concerned, the data analysis revealed that there is no relationship between the use of pronunciation learning strategies and the perception of English monophthongs and diphthongs; however, other findings showed that there is a

significant but weak relationship between pronunciation learning strategy use and the production of English monophthongs and diphthongs.

It is apparent that the assessment of pronunciation ability is addressed differently in the aforementioned studies; whereas some studies have mainly focused on assessing pronunciation at the holistic level (i.e., Eckstein, 2007; Berkil, 2008), the other study (i.e., Rokoszewska, 2012) limited the scope of inquiry at mastering the English vowels. Therefore, the relationship between the use of pronunciation learning strategies and different aspects of pronunciation ability is still unclear and offers a fertile area for further research.

3. Statement of the Problem

Modern pronunciation research and pedagogy are stressing the goal of achieving intelligible pronunciation in a foreign language learner's speech. Such aim, hence, dictates the importance of exhibiting an accurate production of the target language vowels and consonants; indeed, segmental errors were found to be harmful for the intelligibility of speech (Thomson, 2018). However, mastering the segmental features of the target language pronunciation is quite challenging for first year EFL learners who may consider formal instruction as the only source for improving their pronunciation.

Generally speaking, learning a foreign language pronunciation is associated with an array of influencing variables (e.g., motivation, aptitude, exposure, and formal instruction as cited in Berkil, 2008 p. 7). Apparently, the role of strategy use receives the least attention among these variables. In fact, the use of learning strategies has originally been associated with successful language learners who were found to be more strategic learners in comparison with less successful ones (Rubin , 1975) . Based on this

observation, hence, nothing is known about the relationship between the use of pronunciation learning strategies and mastering the segmental features of pronunciation. Therefore, investigating the relationship between the use of pronunciation learning strategies and pronunciation accuracy at the segmental level is another area worth for research.

4. Research Questions

The present study addresses the following research questions:

- 1. Which pronunciation learning strategies do first year EFL learners employ in their pronunciation learning?
- 2. Is there a relationship between the use of pronunciation learning strategies and first year EFL learners' pronunciation accuracy at the segmental level?

5. Hypothesis

The current study puts forward the following hypotheses:

- H1: There is a significant correlation between the overall use of pronunciation learning strategies and pronunciation accuracy at the segmental level.
- H2: Students with higher levels of accuracy use pronunciation learning strategies more frequently than students with lower levels of accuracy.

6. Significance of the Study

Owing to the fact that the use of language learning strategies is of great value in instilling autonomous learning into foreign language learners, on the one hand, and

contributing significantly to general language achievement, on the other hand; thus, the current study aims to explore the use of pronunciation learning strategies by first year EFL learners at Mohammed Seddik Ben Yahia University, Jijel. Additionally, the purpose of this study is to further broaden the current knowledge of pronunciation learning strategy use and its relationship with pronunciation ability, more particularly at the segmental level. Therefore, on the ground that learning strategies are teachable, examining whether the use of pronunciation learning strategies has a relationship with the learners' pronunciation accuracy of English segmentals may uncover the strategies that are of significance, in order to sensitize both lower pronunciation proficiency learners for their use and also the teachers for their incorporation in their pronunciation training courses.

7. Research Methodology

This study will be quantitative in nature. In order to address the previously stated research questions, the present investigation will make use of two main research instruments namely, a pronunciation learning strategy questionnaire as well as a pronunciation elicitation task. Firstly, the pronunciation learning strategy questionnaire will be administered to first year EFL students at Mohammad Seddik Ben Yahia University, Jijel, in order to explore the subjects' use of pronunciation learning strategies (i.e., their type and frequency of use) in addition to testing their pronunciation accuracy at the segmental level. Subsequently, by means of the Statistical package of social sciences (SPSS), the correlation between the scores of both the pronunciation strategy questionnaire and pronunciation elicitation task will draw the conclusion about the nature of relationship between the use of pronunciation learning strategies and pronunciation accuracy at the segmental level.

8. The Organization of the Study

The current study consists of two chapters: a theoretical and a practical chapter besides to a general introduction and a general conclusion. The first chapter, the theoretical one, is divided into three sections. The first section provides a brief introduction to language learning strategy literature along with a theoretical overview of pronunciation learning strategies scholarly literature. Subsequently, the second section attempts to review the key issues pertinent to pronunciation learning and teaching. Next, the third section sheds light on issues related to speech sound production and the English sound system.

The next chapter, as practical one, comprises three sections; while the first section will be devoted to set out the methodology followed in this study, the second section will take as its major concern data analysis. Lastly, Issues concerning data interpretation will be discussed in the third section.

Chapter One: Pronunciation Learning Strategies and Pronunciation Accuracy at the Segmental Level

Introduction

Aiming to explore the relationship between the use of pronunciation learning strategies and pronunciation accuracy at the segmental level, the first chapter is exclusively concerned with reviewing the major theoretical aspects related to learning strategies, pronunciation learning and teaching, and speech production. Being divided into three sections, the first section highlights the key issues related to pronunciation learning strategy scholarly literature. The second section subsequently highlights the key issues related to pronunciation learning and teaching. The third section, then, covers some key terms pertinent to speech production as well as the English sound system. Firstly, this section opens up with introducing some background information about the umbrella term i.e. language learning strategies (LLS); it defines LLSs, presents its prominent classification systems, and then the major characteristics of LLSs. Subsequently, since the focus of the study is on pronunciation learning strategies (PLS), present section introduces a background to PLS research, some key definitions of PLS, followed with a detailed review of the widely known classification systems of PLSs. Additionally, issues related to the role of pronunciation learning strategies and strategy instruction are also discussed in the present section.

1.1. Pronunciation and Learning Strategies

Research into language learning strategies (LLS) has attracted interest of many scholars since the 1970's (e.g., Rubin, 1975; Stern, 1975; Naiman, Frohlich, Stern & Todesco, 1978) (as cited in Griffiths & Oxford, 2014). In essence, this interest has primarily stemmed from the intriguing question of what makes some language learners

more successful than others. Since then, language learning strategy research has remained a vibrant arena in second language acquisition body of research, by scoping the strategies used in learning a variety of language-based skills, among them, pronunciation skill.

1.1.1. Definition of Language Learning Strategies

There is a general consensus that research into the "good language learner" (Rubin, 1975; Stern, 1975; Naiman et al., 1978) (as cited in Wray & Hajar, 2015) was the springboard for language learning strategy research; conversely, it is strikingly apparent that the endeavors to define the strategy concept have engendered controversy and "no consensus" in language learning strategies scholarly literature. Indeed , several scholars attempted to elucidate what does the term learning strategy stand for, which is, in Ellis (1994) view, such a "fuzzy" concept to demystify (as cited in Griffiths & Oxford, 2014, p. 2).

Basically, the term strategy derives from the ancient Greek word "strategia" which stands for "generalship or the art of war"(Oxford, 1990,p.7). Implying characteristics of planning, competition, conscious manipulation, and movement towards a goal; the concept of strategy was, then, embraced as learning strategies in the field of education (Oxford, 1990, pp. 7-8).

As far as the term learning strategy is concerned, the earlier definition offered by Rubin (1975) defined language learning strategies as the "techniques or devices which a learner may use to acquire knowledge" (p. 43). Besides , Rubin (1987) further portrayed learning strategies as "any set of operations , plans, or routines , used by the learners to facilitate the obtaining , retrieval , storage , and use of information" (p. 19) (as cited in El aouri , 2013, p. 50). With another definition; learning strategies , according to Weinstein and Moyer (1986), are "behaviors and thoughts that a learner engages in during learning

that are intended to influence the learner's encoding process" (as cited in Ellis, 1994, p. 31). Similarly, O'Malley and Chamot (1990) equated learning strategies with "special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information (p. 1). Following the same attempts to clarify the concept of LLSs , Oxford (1990) put forward a seemingly more elaborate definition, wherein she identified LLS as " special actions taken by the learner to make learning easier , faster, more enjoyable, more self-directed ,and more transferrable to new situations" (p. 8).

As noted above, it is clearly noticeable that the concept of learning strategies is not that transparent. In spite of such divergence, the purpose of adopting the use of language learning strategies binds the above-stated definitions. Put more plainly, language learning strategies are those special actions and behaviors that second and foreign language learners intentionally and consciously resort to, in order to yield fruitful results as far as their language achievement is concerned.

1.1.2. Classification of Language Learning Strategies

In Parallel with the lack of an agreed-upon definition, the classification of LLS is another controversial area within language learning strategy scholarly literature (Griffiths & Oxford, 2014, p. 4). In this sense, there exist several classification systems of LLS (Wenden & Rubin, 1987; O'Malley, Chamot, Stewner-Manzanares, Kűpper, & Russo, 1985; Oxford, 1990; Stern, 1992; Ellis, 1990) (as cited in Vlčková, Berger, & Völkle, 2013, p. 95). Yet, a few taxonomies were granted considerable attention namely, O'Malley and Chamot's (1990) and Oxford's (1990) classification systems as evidenced by their striking appearance in LLS scholarly literature.

O'Malley and Chamot's (1990) research into language learning strategies has remarkably gained a special attention within LLS body of research. Indeed, thanks to their

concerted efforts, LLS research has found its path towards the cognitive theory (Peterson, 2000, p. 5). As a good point of reference, O'Malley and Chamot (1990) devised the first taxonomy of LLS "based not on direct interviews, diaries and observations, but on research conducted within the frame of cognitive psychology" (Szyszka, 2017, p. 35). In doing so, they built upon a "tripartite" categorization scheme (Griffiths & Oxford, 2014, p. 4) which distinguished between the metacognitive strategies, cognitive strategies as well as the socioaffective strategies.

The following three main sets forge their LLS classification system ,depending on the type and level of processing involved:

- **Metacognitive strategies**: also known as higher order executive skills, these are the strategies which involve planning, monitoring, and evaluation of the success of a learning task.
- **Cognitive strategies**: these strategies entail directly operating on and manipulating the target language materials to be learnt ; rehearsal, organization, and elaboration processes are the strategies clustered within this category.
- **Socioaffective strategies**: these strategies entail learning through interaction with others or with one's own attitudes or feelings through cooperation, questioning, and self-talk (O'Malley & Chamot, 1990, pp. 44-45).

Oxford (1990), the other pioneering figure of LLS research, has offered a more elaborate taxonomy of LLS. Dissimilar to O'Malley and Chamot's (1990) three-cluster categorization system, Oxford (1990) adopted the "direct/ indirect strategy dichotomy" advanced by Rubin (1981) who initiated the earlier endeavors to classify LLS (as cited in Griffiths & Oxford, 2014, p. 5) . Additionally, Oxford (1990) further subdivided both the direct and indirect classes into six groups in total. Included within the direct class;

memory, cognitive, and compensation strategies entail the direct use of the target language and essentially the "mental processing of information" (Oxford, 1990, p. 135). Clustered under the indirect class; however, the metacognitive, affective, and social strategies mainly "support and manage language learning without …directly involving the target language" (Oxford, 1990, p.135). Yet, both the direct and indirect strategies, as Oxford (1990), maintained, are in "mutual support" (p. 15).

Oxford's (1990) classification scheme comprises six categories in total, which are summarized as follows:

- **Memory strategies:** also known as "mnemonic" (Oxford, 1990, p. 38), the use of these strategies serves the function of sustaining the storage of new information in memory, in order to remember it when the learning situation calls for its retrieval.
- **Cognitive strategies**: these strategies, according to Oxford (1990), are used for the purpose of "manipulation and transformation" of the target language; accordingly, the use of these strategies facilitate the understanding and production of the target language.
- **Compensation strategies:** as the name implies, compensation strategies are those strategies used by the learner in order to make up for the missing knowledge in the target language, more particularly in grammar and vocabulary, for either the comprehension or production tasks.
- **Metacognitive strategies:** the term metacognitive, as Oxford (1990) defined, means "beyond, beside, or with the cognitive". Metacognitive strategies are those strategies employed by learners in order to coordinate the learning process by means of three sets of strategies including, centering and arranging, planning and evaluating (pp. 136-137).

- **Affective strategies:** since the affective factor, which refers to the learner's emotions and attitudes, has a share in the language learning process; the affective strategies are those practices which serve the function of regulating the learner's emotions through the use of the following sub-strategies: lowering anxiety, encouraging oneself, and taking one's emotional temperature (Oxford, 1990, p. 141).
- **Social strategies:** these are the strategies that involve the learner in an interaction with the social partners during their language learning process. In so doing, the learner resorts to asking questions, cooperating, and empathizing with others. (Oxford, 1990, p. 145).

Apparently, by drawing a comparison between O'Malley and Chamot's (1990) and Oxford's (1990) taxonomies, it can be clearly seen that the two typologies bear some similarities as well as some differences in approaching their classification scheme; with the former subdivided into metacognitive, cognitive, and socioaffective strategies, the latter has differentiated between social and affective strategies in addition to cognitive and memory strategies as independent categories. Needless to mention, both Oxford's (1990) and O'Malley & Chamot's (1990) models are among the most frequently deployed taxonomies in LLS research. Generally speaking, the classification of language learning strategies, as Ellis (1994) pointed out, is an accomplishment in the field of LLS (as cited in Peterson, 2000, p. 5). Nevertheless, criticism was leveled at language learning strategy research which yielded, in Dörnyei and Skehan's (2003) view, a mass of 'conceptual ambiguity' (as cited in Griffiths & Oxford, 2014, p. 3).This is presumably premised on the lack of clear-cut criteria for defining LLS as well as classifying them which may bring about divergent findings and eventually inconclusive results in language learning strategy research.

1.1.3. Characteristics of Language Learning Strategies

Far away from of the disparate definitions and the classification systems prevailing in the scholarly literature, the role of language learning strategies is undoubtedly unquestionable. As oxford (1990) pointed out, the use of language learning strategies is held important, for they play a pivotal role in developing the learners' communicative competence as well as boosting the learners' language proficiency, which will also bolster their self-confidence (p. 1). In essence, LLS exhibit some key features which are summarized, according to Oxford (1990), as follows:

- Contribute to the main goal, communicative competence.
- Allow learners to become more self-directed.
- Expound the role of the teacher.
- Are problem oriented.
- Are specific actions taken by the learner
- Involve many aspects of the learner, not just cognition.
- Support learning both directly and indirectly.
- Are not always observable.
- Are often conscious.
- Can be taught.
- Are flexible.
- Are influenced by a variety of factors. (Oxford, 1990, p. 9).

1.1.4. Background to Pronunciation Learning Strategy Research

It is common knowledge that the interest into language learning strategy research has primarily sprung up from Rubin's (1975) article on what the "good Language Learner" can teach us (Wray & Hajar, 2015, p. 2).Arguably, demystifying the behaviors of

successful language learners would give insights into the "devices" and "techniques" (Rubin, 1975) which account for successful second language attainment. Therefore, given the significance of strategy use in sustaining successful second language acquisition (Oxford, 1986b as cited in Peterson, 2000, p. 3), the body of LLS research has expanded its scope of inquiry from investigating general language learning strategy use to exploring strategies employed in language based skills namely, vocabulary (e.g., Schmitt &Schmitt, 1993), reading (e.g., Lau ,2006) , writing (e.g., Sullivan ,2006) and listening and speaking (e.g., Kao , 2006) (as cited in Berkil, 2008, p. 5). However, research into learning strategies has unsurprisingly ignored the field of pronunciation skill for nearly a quarter of a century from its emergence. Needless to wonder, pronunciation, in turn, was considered the "poor cousin" of EFL world (Brinton, 1997, p. 11).

Nevertheless, there was a revitalization of interest in pronunciation learning which stemmed from the recognition that "there is a threshold level of pronunciation for non native speakers of English; if they fall below the threshold level, they will have oral communication problems" (Celce- Murcia, et al., 1996) (as cited in Berkil , 2008, p.16). Accordingly , this interest has prompted a bulk of research to probe into the affecting factors on pronunciation attainment (e.g., Bongaerts, 1999, 2005; Dalton-Puffer ,el al., 1997; Elliot, 1995; Fledge & Fletcher, 1992) (as cited in Berkil, 2009, p. 7). Consequently, Peterson (2000) lamented that "a more basic knowledge about the relationship between learning strategies and pronunciation is needed" (p. 3). Indeed, Peterson (2000) pioneered the field that orchestrated the area of pronunciation learning with learning strategies.

Following in Peterson's (2000) footsteps, other studies endeavored to shine light on pronunciation learning in relation to the use of learning strategies (Derwing & Rossiter, 2002; Osburne, 2003; Vitanova & Miller, 2002) (as cited in Eckstein, 2007). More

importantly, some studies took another turning and investigated the relationship between the use of pronunciation learning strategies and pronunciation ability (Eckstein, 2007; Berkil, 2009; Rokoszewska 2012). Other studies, with a promising perspective, investigated the effectiveness of pronunciation strategy instruction (Sardegna, 2009, 2011; Ingels, 2011) (as cited in Chang, 2012).

1.1.5. Definition of Pronunciation Learning Strategies

Given the fact that pronunciation learning strategy research is still in its infancy, meager definitions of pronunciation learning strategies (PLS) can be found in the relevant literature. Accordingly, the endeavors to define pronunciation learning strategies have typically drawn upon earlier definitions of language learning strategies.

Peterson (2000), in line with Oxford's (1990) definition of language learning strategies, identified PLS as "steps taken by students to enhance their own pronunciation learning" (p. 7). Berkil (2008) , in turn , literally adopted Oxford's (1990) definition of LLS, and defined PLS as " specific actions taken by the learner to make pronunciation learning easier, faster, more enjoyable, more self- directed, more effective, and more transferable to new situations" (p. 2). Another definition of PLSs was advanced by Pawlak (2010) who drew upon Cohen's and Pinilla-Herrera's (2009) definition of grammar learning strategies ; pronunciation learning strategies , as mentioned by Pawlak (2010) , are " deliberate actions and thought that are consciously employed, often in a logical sequence , for learning and gaining greater control over the use of various aspects of pronunciation" (p. 191).

In short, similar to the goal of language learning strategies, pronunciation learning strategies can also be identified as specific actions, tactics and behaviors that

foreign language learners consciously adopt in their approach to precisely sustain their pronunciation learning.

1.1.6. Classification of Pronunciation Learning Strategies

Owing to the fact that pronunciation learning has long been overlooked from the realm of strategy research scope of inquiry, recent concerns to devise a classification system of pronunciation learning strategies reflect signs of maturity within the newly emerging field of inquiry. Apparently, the interest into PLSs has gone beyond the mere documentation of PLS, and moved on to the classification of these strategies (Peterson, 2000; Eckstein 2007; Pawlak, 2010).

1.1.6.1. Peterson's Taxonomy (2000)

Peterson (2000) , the pioneering figure of pronunciation learning strategy research, devised the first taxonomy of pronunciation learning strategies, in which she opted for Oxford's (1990) widely accepted classification scheme. As Peterson (2000) assumed, Oxford's (1990) system of "six strategy groups ha[s] helped researchers in numerous studies to consider which strategies may work in combination to facilitate learning" (p. 14). Likewise, Peterson (2000) divided her taxonomy into six strategy groups including, memory, cognitive, compensation, metacognitive, affective, and social category. Besides, each of the twelve strategies and the forty three tactics accumulated from her study as well as from the review of the relevant literature corresponds to one of the already mentioned six categories. According to Szyszka (2017), Peterson (2000) differentiated between the term strategy and tactic .i.e., strategies were perceived as "general approaches and PL tactics as specific actions supporting the effectiveness of more general strategies" (p. 39). Peterson's (2000) initiated the attempts to advance a classification scheme for PLS.

Still, Peterson speculated that future studies would enrich and re-examine her approach of categorization.

1.1.6.2. Eckstein's Taxonomy (2007)

In an attempt to devise a "theory-driven" scheme that would pertain to the process of pronunciation acquisition, Eckstein (2007) proposed another classification system that paralleled the categorization of pronunciation learning strategies with his pronunciation acquisition construct (Eckstein, 2007, p. 28). In doing so, Eckstein (2007) drew upon Kolb's (1984 in Eckstein, 2007, p.32) learning cycle construct for its ability to account for learning in multiple fields (Dornyei & Skehan, 2003) (as cited in Eckstein, 2007).

Kolb's (1984) (as cited in Eckstein, 2007) approaches learning in a cyclical manner, wherein the learners go though four consecutive areas of learning. At first, the learners encounter the first stage of concrete experience; then, they move to reflection on observation; later on, the learners work on the abstract conceptualization based on reflection; eventually, the learners take action based on new conceptualization. In similar fashion, Eckstein devised his pronunciation acquisition construct by comparing Kolb's four stages of learning to the four stages of pronunciation acquisition within SLA research (Szyszka, 2016, p. 40). The following table illustrates how Kolb's (1984 in Eckstein, 2007) learning cycle construct is related to pronunciation acquisition theory:

Table 1

Kolb's (1984) Construct and Pronunciation Acquisition Theory

Kolb's (1984) Learning Cycle Construct	Pronunciation Acquisition Construct
Concrete Experience	Input/Practice
Reflection on Observation	Feedback /Noticing
Abstract Conceptualization	Hypothesis forming
Action Based on New Conceptualization	Hypothesis testing

Adopted from Eckstein (2007, p. 32)

To put it in a nutshell, Eckstein's pronunciation learning strategy taxonomy comprises four categories: input/practice, feedback /noticing, hypothesis forming, and hypothesis testing. Accordingly, each set of pronunciation learning strategies pertains to a particular category.

1.1.6.3. Pawlak's Taxonomy(2010)

Pawlak (2010) offered another PLS classification system whereby the following four main categories are modeled: metacognitive (e.g., looking for opportunities to practice new sounds, recording oneself to self-evaluate one's pronunciation) , cognitive (e.g., using phonetic symbols to remember sounds and forming and testing hypothesis about pronunciation rules), affective (e.g., using relaxation techniques when encountering problems in pronunciation) and social category (e.g., asking others for correction for pronunciation errors).

Obviously , Pawlak (2010) approached his taxonomy in accordance with both O'Malley and Chamot's (1990) and Oxford's (1990) typologies (Szyszka , 2017).To illustrate, the distinction between cognitive and metacognitive strategies found in Oxford's

scheme is wiped away as it is the case in O'Malley and Chamot's (1990) taxonomy; accordingly, memory strategies are clustered under the cognitive strategies . In addition, compensation strategies are entirely abolished as in O'Malley and Chamot's (1990) typology; yet, the distinction between the social and the affective strategies is still maintained building upon Oxford's (2010) taxonomy (Pawlak, 2010, p. 195). This classification system , as Pawlak (2010) suggested, remained open for future modification as further research will unravel other PLS that are still not unveiled (as cited in Szyszka , 2017).

In sum, it is worth mentioning that pronunciation learning strategy research has undergone severe neglect within language learning strategy research. Nevertheless, the attempts to classify PLS in a well devised taxonomy are held important in optimizing the field of PLS and extending the knowledge of PLS use and more particularly the affecting factors on its choice.

1.1.7. The Role of Pronunciation Learning Strategies in Pronunciation Learning

It is common sense knowledge that language learning strategies are deemed important in promoting successful second language attainment. Together with their role in inculcating autonomy into second language learners, learning strategies , as Oxford (1990) believed, "can increase learner's language proficiency, self confidence and motivation" (p. 236 as cited in Szyszka, 2017, p. 48). As far as pronunciation learning is concerned, Szyszka (2017), with a similar vein, viewed pronunciation learning strategies as "effective devices for more learner-centered and autonomous pronunciation acquisition" (p. 48). Beyond doubt, the emphasis on learner centeredness as an alternative to the earlier dominant paradigm of teacher centeredness has also cast it light on the area of pronunciation learning. Arguably, pronunciation acquisition is identified with factors

pertinent to learner and learning rather than teacher and teaching (Jones, 2002; Taminaga, 2009 as cited in Szyszka, 2017). With this in mind, the use of pronunciation learning strategies is valuable in fostering independent learning. With the increasing interest in exploring the area of PLS, evidence from research studies substantiated the role of PLSs in the process of pronunciation acquisition (Berkil, 2008; Bukowski, 2004; Eckstein, 2007; Osburne, 2003; Pawlak, 2006, 2008, 2010; Peterson, 2000 ; Thu, 2009 ; Vitanova & Miller, 2002; Wrembel, 2008 as cited in Szyszka ,2017, p. 48).

In brief, there is no doubt that the use of learning strategies is of considerable importance in sustaining the process of second language learning. With more research studies corroborating the significance of pronunciation learning strategy use in facilitating the learning of different features of pronunciation, the incorporation of PLS in pronunciation training is the next promising phase in PLS research.

1.1.8. Pronunciation Learning Strategy Instruction

One of the insights coming forth from language learning strategy literature is the effectiveness of strategy instruction (Peterson, 2000, p. 5). Thu (2009) considered that one of the reasons which accounts for the importance of LLS research is the value of strategy training (as cited in Szyszka, 2017, p. 48). In a similar fashion, understanding the value of pronunciation learning strategies in pronunciation learning is a gateway towards targeting the effective PLSs in pronunciation training. Indeed, an emerging concern in PLS research sought to explore the effectiveness of pronunciation learning strategy instruction (Sardegna, 2009, 2011; Ingels, 2011). Although it was limited in number, these research studies offered promising result for optimizing the field of pronunciation strategy training.

One of the studies that examined the effectiveness of pronunciation learning strategy instruction was conducted by Sardegna (2009) in a classroom based instruction

study. This study investigated the effectiveness of covert rehearsal strategy training for improving ESL university student's accuracy of primary stress, phrase stress, construction stress and word stress. The covert rehearsal strategies include critical listening, self monitoring, rehearsal and self correction. As reported, the student's use of these strategies resulted in significant increase in accuracy on all the features targeted in this study (as cited in Ingels, 2011, p. 35).

In a relatively similar study, Ingel (2011) evaluated the extent to which the use of self monitoring strategies including, critical listening, transcription, annotation, and rehearsing contributed to accuracy improvement in certain suprasegmental features. The result showed that the combination of listening, transcription, annotating and rehearsal was the most effective strategy type, with less successful learners achieving more progress than successful ones.

Sardegna (2011), with another study, investigated the effect of teaching pronunciation learning strategies to international graduate students for improving linking sounds within and across words. She followed Dickerson's covert Rehearsal model to give instruction on pronunciation learning strategies. The findings showed that the learners made significant short term improvement .The long term improvement was also noticeable as well (Chang, 2012, pp. 30-31).

1.1.8.1. Dickerson's Covert Rehearsal Model

Stemming from the recognition that "learners need to learn how to learn, and teachers need to learn how to facilitate the process" (Oxford, 1990, p. 201), the traditional spoon-feeding teaching approach has accordingly fallen into disfavor. Instead, teachers are encouraged to instill the seeds of self-directed learning to enable their learners to

consistently progress via the teaching of learning strategies. In doing so, strategy training offers the satisfactory option to hone the learners' strategy use.

In the area of pronunciation learning, Dickerson's model is an instructional model which handles pronunciation strategy training. More interestingly, this model was used in studies that tested the effectiveness of pronunciation learning strategy training (Ingles, 2011; Sardegna, 2009, 2011) (as cited in Chang, 2012, p. 32). Dickerson's covert rehearsal model consists of a set of steps which was developed for training learners how to take charge of their pronunciation learning. Covert rehearsal is a strategy that is often used by successful language learners, which literally means "private practice" or practicing speaking English out loud when you are alone. The steps of the model are summarized as follows:

1. Finding privacy to practice.
2. Practicing aloud.
3. Monitoring production for target features.
4. Comparing production with models.
5. Adjusting production to match the models.
6. Practicing the adjustment out loud until accurate and fluent (Chang, 2012, pp. 33-34).

The first vital step in covert rehearsal model is to find privacy to practice. Practicing alone, in fact, provides the learner with the opportunity to pay much more attention to his or her production as opposed to engaging in conversations with others. In the next phase, the learner practices aloud to generate natural production. This practice, however, should be coupled with self monitoring, that is, listening critically to their production and paying close attention to specific features of pronunciation via self

recording. In the next step, the learner compares his production with a target like model which are usually stored in their memory in order to unveil the problematic area in his production .The learner familiarizes himself with these models via extensive listening along with the rules he or she learns in class. Once the mismatches are identified, it is the learner's task to self correct and adjusts his production to meet with the target model. As the final stage, the learner practices the adjustment out loud in order to reach accuracy and fluency in his production and eventually automaticity in their public production (Chang, 2012, pp. 34-36).

Conclusion

This section has been devoted to cast light on both language learning strategies and pronunciation learning strategies relevant literature. The discussion, in this section, opened up with defining language learning strategies followed by a review of the most widely used LLS taxonomies together with the major characteristics of LLS. Additionally, this section introduced a background to pronunciation learning strategy research, some definitions of pronunciation learning strategies, the major taxonomies of PLS along with the role of pronunciation learning strategy use and pronunciation learning strategy instruction.

Section Two: Pronunciation Learning and Teaching

Introduction

Given the status of the language of international communication, showing a good command of English pronunciation is more than a prerequisite for manifesting successful oral communication .This section, hence, is devoted to cast light on the literature pertinent to pronunciation learning and teaching. It first elucidates some key concepts coupled to pronunciation and speech. Then, it examines pronunciation features in parallel with the role of segmental ones in intelligible pronunciation. Subsequently, the present section touches upon the history of pronunciation teaching, the influencing factors on pronunciation attainment, pronunciation teaching models along with issues relevant to pronunciation assessment, respectively.

1.2.1. Pronunciation and Speaking

Given the priority of speech over writing, oral communication is usually appraised as the backbone of learning a second or foreign language. Generally speaking, EFL learners lean towards perfecting their speaking abilities more than the other language skills. More interestingly, the way the learners pronounce a sound, a word, or an utterance is crucially underscored in their oral production. Needless to say, there is the interplay between pronunciation and speaking skill; since pronunciation accounts for the intelligibility of speech, the comprehensibility of the spoken language would be guaranteed. Recently, pronunciation research and pedagogy is remarkably associated with concepts of intelligibility and comprehensibility as an alternative to that of nativeness. In the course of evaluating EFL learners' speech, however; the terms intelligibility, comprehensibility, and accentedness are often used interchangeably.

1.2.1.1. Accentedness, Intelligibility, and Comprehensibility

It is wrongly believed that what elevates the success of oral communication is exhibiting a native-like accent ; instead , as Derwing and Munro (2014) dismissed, "the study of accentedness is not relevant to second language teaching .Far more important are concepts of intelligibility and comprehensibility, both of which are strongly connected to communicative success" (p. 41). As a matter of fact, exhibiting a foreign accent in one's speech is arguably an inherent feature in the case of learning a target language after childhood (Scovel, 1988) (as cited in Munro, Derwing, & Morton, 2006, p. 112); still, accentedness is sometimes deleterious to the intelligibility of the speech (Munro et al., 2006, p. 112). Accentedness, according to Munro et al. (2006), refers to "the degree to which the production of an utterance sounds different from an expected production pattern" (p. 112). Put it differently, accentedness is relevant to how different a second language speaker's speech from a standard variety of the target language.

Intelligibility, the concept which is crucially underscored in EFL learner's speech, pertains to "the extent to which a speaker's utterance is actually understood" (Munro et al., 2006, p. 112). Apparently, the meaning of intelligibility overlaps with that of comprehensibility. As Munro et al. (2006) clarified; comprehensibility is relevant to how the listener actually perceives an utterance in terms of the difficulty to understand it. Put it more plainly by Derwing and Munro (2009), "comprehensibility is about the listeners' efforts, and intelligibility is the end result; how much the listener actually understood" (p. 480 as cited in Yan & Ginther, 2018, p. 68).

With respect to the relationship between intelligibility, comprehensibility and accentedness, research studies (e.g., Derwing & Munro, 1997; Munro, 2008; Munro & Derwing, 1995) (as cited in Levis, 2005, p. 370) suggested that there is no clear conflation

between the understanding of speech and the speaker's accent. Accordingly, highly unintelligible speech is usually deemed as highly accented; conversely, highly accented speech is not always judged as unintelligible (Yan & Ginther, 2018, p. 68).

In short, the speaker's accent, or "deviation from the selected standard or norm" may impact the comprehension or "the processing effort the listener expends" in the course of arriving at of what is actually intelligible or understood (Yan & Ginther, 2018, p. 68).

1.2.1.2. Intelligibility and Nativeness Principle

One of the ultimate goals of a foreign language learner is to achieve a native-like pronunciation in the target language. In point of fact, pronunciation research and pedagogy, according to Levis (2005), have long been overwhelmed by two competing ideologies: the nativeness and intelligibility principle.

Nativeness principle, on the one hand, "holds that the appropriate pronunciation goal for learners is a native -like accent , and therefore L2 pronunciation should be judged according to its adherence to native norms" (Harding, 2018, p. 36) ; that is, a native-like proficiency was applauded as the touchstone for foreign language pronunciation teaching and assessment. By taking into account its earlier dominance prior to the 1960's,the nativeness principle was then relegated to the backseat of pronunciation teaching priorities as research findings corroborated the claim that the attainment of a native-like pronunciation "appeared to be biologically conditioned to occur before adulthood " (Lenneberg, 1967; Scovel, 1995) (as cited in Levis , 2005, p. 370).

Alternatively, the intelligibility principle, on the other hand, holds that "L2 learners should aim for pronunciation that is easily understood by a board range of listeners" (Harding, 2018, p. 36). In other words; since the nativeness principle turned to be such an unfeasible goal to reach, the learners are only recommended to guarantee that

their speech is understood. The intelligibility principle, therefore, has been embraced as "a guiding metric in pronunciation teaching", which is markedly attributed to the success in oral communication (Munro, Derwing, & Thomson, 2015, p. 40).

1.2.2. Pronunciation Features

One of the most discernible features of the individual's speech is his or her pronunciation of sounds and words. Pronunciation, as defined by Roach (2009) is "the act of producing the sounds of the language" (p. 64 as cited in Szyszka, 2017, p. 6). In a more elaborate definition, pronunciation is understood by Szyszka (2017) as "the way a learner utters or articulates both segmental and suprasegmental features of a foreign language as well as how he or she perceives and interprets them" (p. 8). Extrapolating from Szyszka's (2017) definition, pronunciation involves two aspects: the segmental and suprasegmental features. The segmental features basically refer to the collection of the language sounds which are distinguished as vowels and consonants and defined as "discrete unit[s] that can be identified, either physically or auditorily, in the stream of speech" (Crystal, 2008, p. 426).

In addition to the bundle of consonants and vowel sounds, the other features which "surpass" the segmental level are technically known as suprasegmentals. Therefore, suprasegmentals are attributed to "those aspects of speech that involve more than single consonants or vowels" (Ladefoged & Johnson, 2011, p. 243). Suprasegmentals are also labeled the "music of a language", since they pertain to the features of speech that extends over more than a single speech sound, word, or phrase (Ladefoged, 2006).

The suprasegmental features include the following categories such as, intonation, stress, rhythm, and connected speech.

- **Intonation:** as defined by Roach (2002), intonation refers to "the variations in the pitch of a speaker's voice" (p. 39). That is , people tend to form pitch patterns when they speak as a result of raising and lowering the pitch of their voice along with giving a greater degree of loudness to some syllables.
- **Stress:** refers to an emphasis or degree of force in the pronunciation of a given syllable.
- **Rhythm**: speech rhythm is another feature which is subsumed under the suprasegmental category and which is closely pertinent to word stress. Generally speaking, languages are characterized by having rhythmic patterns which are viewed as "perceived regularit [ies] of prominent units in speech" (Crystal, 2008, p. 417).
- **Connected speech:** When words are put together into longer stretches of speech, the pronunciation of individual words can change due to connected speech processes (Knight, 2012). Connected speech refers to the analysis of spoken language in a "continuous sequence", as opposed to the analysis of individual sounds (Crystal, 2008, p. 102). Therefore, connected speech processes involve the following changes: the elision or the deletion of a sound, the liaison or the addition of phonemes in connected speech, and the assimilation of sounds wherein phonemes can change into other phonemes in connected speech (Knight, 2012).

1.2.3. The Role of Segmental Features in Intelligible Pronunciation

It is commonly agreed that "language learners need no more than a comfortably intelligible pronunciation" as a goal for pronunciation teaching and learning (Abercrombie, 1949) (as cited in Dimova, 2018, p. 52). Such need, hence, dictates the focus on teaching those aspects of pronunciation that account for the intelligibility of speech rather than adhering to the "reduction" of the learners' foreign accent (Munro et al., 2015, p. 40). in

this connection, the role of segmental and suprasegmental features on intelligible pronunciation evoked a fervent debate in pronunciation research. As research studies tilt the balance towards prioritizing the role of suprasegmental features in English communication (e.g., Derwing et al., 1998; Hahn 2004; Warner et al., 2009) (as cited in Munro et al., 2015, p. 41), the role of segmental features in achieving intelligible pronunciation is accordingly overshadowed. Regrettably; as Munro et al. (2015) commented, "that observation, however, does not entail that segments should be ignored" (p. 41). To the contrary, segments also carry a weight in accounting for the intelligibility of speech. A role which is robustly corroborated by the functional load principle and Jenkins' (2000) lingua franca core (LFC).

1.2.3.1. The Functional Load Principle

According to Munro et al. (2015), some English segmental sounds are believed "to do more of 'the phonological work' in a language and are consequently more important for intelligibility" than other sounds (p. 41) .In fact, it is premised that some phonemic contrasts have a higher functional load than other distinctions. Functional load in phonology, as King (1967) identified, " is a measure of the work which two phonemes (or a distinctive feature) do in keeping utterances apart" (p. 831). Accordingly, segmental contrasts are ranked according to their importance in pronunciation. In this regard, Munro et al. (2015) posited that segmental errors which carry a high functional load are presumed to negatively impact the listener's comprehension.

Interestingly, in their attempt to test the functional load principle, a research study by Munro et al. (2015) revealed that "consonant errors involving high functional load segments did indeed cause a greater loss of comprehensibility than did low functional load errors" (p. 41).To exemplify; the substitution of /l/ for /r/ ,as a high functional load error

,affects negatively comprehensibility when compared with the substitution of /d/ for /ð/, as a low functional load error (Munro & Derwing, 2006 as cited in Thomson, 2018, p. 23) .Equally important; Bent, Bradlow, and Smith (2007) found that vowels are more important in contributing to the intelligibility of words (as cited in Thomson, 2018, p. 23).

1.1.3.2. Jenkins' Lingua Franca Core (2000)

Jenkins (2000) proposed an intelligibility-based pronunciation instruction which supports the teaching of English as a lingua franca (as cited in Levis, 2005, p. 371). Given the importance of uncovering the features attributed to the intelligibility of speech, Jenkins (2000) conducted a non native speaker's corpus analysis of the phonological features ascribed to communication success or breakdown (Dimova, 2018, p. 54). Remarkably, Jenkins' (2000) empirical research has revitalized the emphasis on segmentals which are deemed "vital for the preservation of phonological intelligibility" (p.135). Indeed, the segmental sounds dominated Jenkins' (2000) 'lingua franca core', which is a list of pronunciation features deemed to be crucial in achieving intelligible pronunciation. This list includes the following features as Jenkins (2000) has identified:

- accurate pronunciation of most consonant sounds;
- preservation of most consonant clusters;
- vowel length (especially before voiced /unvoiced consonants;
- appropriate word grouping and placement of nuclear stress (as cited in Dimova, 2018, p. 55).

On the basis of what has been discussed above, it seems reasonable to assume that the segmental features of pronunciation have also a share in rendering the speech intelligible.

1.1.4. A Historical Backgroung to Pronunciation Teaching

Influenced by the drastic change in second and foreign language teaching and learning perspectives, pronunciation teaching has witnessed what Celce-Murcia (n.d) likened as the "swinging pendalum" (as cited in Brinton, 1997, p.11) ,wherein the status of pronunciation instruction was upgraded in certain times and downgraded in others .Apparently, pronunciation teaching history was shaped by "questions of whether pronunciation should (or can) be taught and ,if so,what should be taught and how" (Morley, 1991, p. 481).

Back in the times of Grammar Translation Method , pronunciation teaching was given the cold shoulder and deemed irrelevant in the realm of second and foreign language teaching; yet, if scant attention was paid to pronunciation skill ,"the occational teacher correction of students oral reading of a second language passage" would be the reason behind it (Brinton, 1997, p. 11). As reading the target language literature denotes the defining value of second and foreign language learning (Larsen-Freeman, 2000, p. 17) , reading and writing skills were accentuated at the expense of listening and speaking skills which were,then, pushed to the margins of second and foreign language teaching landscape along with pronunciation skill

In the subsequent method for foreign language teaching namely, the Direct Method, the teaching of pronunciation was not taken for granted ; rather ,correct pronunciation was crucially emphasized. In so doing ;whilst it was deemed "primitive", pronunciation was instructed via the "imititive -intuitive" approach ,wherein the students are invited to attentively listen to and intuitively imitate and repeat after a native like model (Celce-Murcia et al., 1996, p. 3). Remarkably , the rise of the reform movement in the 1880's was a landmark in the history of second language profession in general ,and

pronunciation teaching in particular. Indeed , thanks to the notable work of reformist linguists such as Henry Sweet ,Wilhelm Vietor, and Paul Passy, the international phonetic association was founded in the 1886 along with the international phonetic alphabet (IPA) which paved the way for a more systematic teaching of pronunciation (Celce Murcia et al., 1996, p. 3).

From the 1940's to the 1950's , pronunciation instruction enjoyed an important status as the era of both Audiolingualism (USA) and the Oral approach (UK) had dawned (Clece -Murcia , 1996, p . 3). Actually, pronunciation was taught explicitly with higher attention given to accuracy (Morley, 1991, p. 484). Additionally , the pronunciation class centered around the teaching of "phonemes and their meaningful contrasts , environmental allophonic variation ,and combinatory phonotactic rules" (Morley, 1991, p. 484). Furthermore, an amphasis was put on the use of minimal pair drills at the word and sentence level as well as the imitation of a native like model (Celce -Murcia et al., 1996, p. 3).

From the 1960's to the 1970's , marked by the rise of cognitive approach, pronunciation instruction fell into disfavor. As language was to be viewed as a rule-governed behavior rather than habit formation (Celce Murcia et al.,1996,p. 5) , pronunciation instruction was overshadowed with "questions about the assumption it could be learnt at all under direct instruction" (Morley,1991,p. 485). In addition , criticism was leveled at adopting native-like pronunciation as a yardstick for second language pronunciation instruction. Arguably, native-like pronunciation was a far-fetching goal ; instead , efforts should be invested on more learnable areas ,that is of, grammar and vocabulary skills .

With the advent of communiacative language teaching approah , endorsing the notion of communicative competence,pronunciation was granted a pivotal role for the success of oral communication; yet, the native like principle was abondanded in favor of intellegible pronunciation ,which was alternatively underscored with a focus on the prosody and suprasegmentals rather than individual sounds .

In brief, it is quite noticeable that the outlook on pronunciation teaching fluctuated in accordance with the shift in foreign language teaching methods ; the latter ,in turn,were also bound up with the change in the underlying assumptions that underpined foreign language teaching and learning landscape.

1.1.5.The Affecting Factors on Pronunciation Learning

It is widely ackowledge that intellegible pronunciation is a prerequisite for manifestiing successful oral communincation (Celce-Murcia, et al., 1996; Fraser, 2000; Morley, 1991). Ironically, pronunciation attainment is the most challenging facet in the realm of second and foreign language learning. Likened as the “Cinderella area” of EFL world (Kelly ,1969) (as cited in Brinton, 1997, p. 11), the learning of target language pronunciation is seemingly burdened with a bundle of influencing factors which may hinder or reversely ease the process of L2 pronunciation acquisition.Grouped as internal and external factors (Zhang , 2009) , research into the affecting factors on pronunciation attainment is,hence, another prolific area held important in second language acquisition research.

1.1.5.1. Internal Factors

1.1.5.1.1.Age

The learner's age is a prominent biological factor which is determinent to the process of L2 learning in general , and pronunciation acquisition in particular . Building upon Lennerberg's (1967) "critical period hypothesis", it is assumed that young learners outperform their adult counterparts in pronunciation learning .Put more plainly, there is a critical age period, overlapping the age of puberty, "during which several maturational and neurological changes take place" (Szyszka, 2017, p. 19). Therefore , an EFL learner is likely to successfully attain the target language pronunciation in this period ; conversely,if the learner exceeds this sensitive period, the likelihood to acquire a native like pronunciation substantiallydecreases.

1.1.5.1.2.Aptitude

The question of whether some second language learners are naturally endowed with an ability to successfully acquire a second language caught the attention of researchers in the field of SLA research (e.g., Caroll, 1962 , 1981 as cited in Zhang , 2009).This innate capacity , termed as language aptitude, consists of "relatively stable factors within the individual that promote successfully language learning" (Leaver , Ehrman & Shekhtman, 2005, p. 56) (as cited in Szyszka, 2017, p. 20). Language aptitude , as divided by Caroll (198)(as cited in Szyszka, 2017) , encompasses four traits namely, phonetic coding ability, grammatical sensitivity, inductive language learning ability and memory . As far as pronunciation learning is concerned , phonetic encoding is considerebly pertinent to pronunciation acquisition and whicn refers to the ability to discriminate between the sounds of the target language (Szyszka, 2017, p. 20). More precisely; Piske , MacKay, and Fledge (2001) added that the ability to mimic unfamiliar sounds has repeatedy been found as a significant predictor of degree of L2 foreign accent (p. 202).

1.1.5.1.3.Motivation

It is a common view that successfully attaining a target language stems primarily from the desire to learn that language. In similar fashion, one of the highly infuencial factors ascribed to successful pronunciation attainment is motivation. As learning the target language pronunciation is such a challenging course for L2 learners, being highly motivated ignites the inner drive to overcome the pitfalls that any L2 learner may stumble across. In this regard, Gardner and Lambert (1972) differentiated between to types of motivation : intrumental and integrative motivation. As the former is attributed to "utalitatian gains" , the latter implies having positive attitudes to become a member of the target language community (as cited in Zhang, 2009, p. 42).

1.1.5.2.External Factors

1.1.5.2.1.Native Language

There is a common consensus that the influence of the native language is inevitable in the process of learning a second language .Likewise, the interference of the first language is another influencial factor as far as L2 pronunciation acquisition is concerned. Generally speaking , the learner's first language sound system has an effect upon the learning of the sound system of the target language (Nation & Newton, 2009) (as cited in Zhang, 2009, p. 44). . Additionally , the learner's foreign accent is generally attributed to the influence of the first language .

1.1.5.2.2.Exposure

Given the nature of learning a target language in a foreign language context, students are generally disadvantaged with scant exposure to authentic native-like models. Needless to say, the importance of exposure to the target language finds its evidence in

Krashen's hypothesis of comprehensible input ; accordingly, "learners acquire language primarily from the input they receive, and they must receive large amount of input before they are required to speak" (Celce-Murcia et al., 1996, pp. 16-17). Relevent to pronunciation learning, the learners who are regularly exposed to the target language are likely to successfully attain the pronunciation of that language . According to Senel (2006), "if a learner is aware of the necessity of being exposed to the target language, she/he should make use of its opportunities. If the learner does that, she/he will be more successful in case of improving his / her pronunciation" (p. 115 as cited in Zhang, 2009, p. 45).

In short, learning target language pronunciation, according to Zhang (2009), is notably tied to a range of influencing factors which can be ascribed to the learner's biological attributes (e.g., age and aptitude), learner's individual differences (e.g., motivation and attitude) or factors linked to the learner 's learning environment (e.g., Native language and exposure).

1.1.6. Pronunciation Teaching Models

It is a common view that the English language is acclaimed as the undisputed lingua franca of nowadays globalised world. As learning English is conceived to open the gate towards economic prosperity, social mobility and educational advancement (Fulcher, 2007) (as cited in sayyadi & Zarifi, 2015, p. 1166) , the teaching of English as a second or a foreign language has dramatically proliferated all over the world. Notably, following Kachru's (1992) three centric circle theory of the English speaking world (as cited in Dimova, 2018), the inner circle varieties, as norm providing models, are traditionally chosen as standards for pronunciation teaching. Arguably, standard English, was perceived " [to center] solely on the educated NS [native speaker] norms because of its prestige,

recognition, and spread" (Dimova, 2017, p. 51). As a good point of reference, Received Pronunciation (RP) and General American (GA) are the most prevalent models for English pronunciation teaching.

Nevertheless, with the growing interest in studying English as a second or a foreign language, English is no longer perceived an exclusive property of the inner circle countries; instead, English is approved to be an international language for communication. Accordingly; some scholars (Jenkins, 2000, 2006; Kachru, 1997 as cited in Scales et al., 2006), advocating the notion of global intelligibility, have deemphasized the selection of a particular native accent as a model for pronunciation teaching and learning (Scales, 2006, p. 716). Indeed, Jenkins (2000) argued that "pronunciation is so much a matter of self-image that students may prefer to keep their accent deliberately" (p. 16 as cited in Szyszka, 2017, p. 14) .With this in mind , Jenkins (2000) advanced a pronunciation teaching model for English as an international language given the name of the lingua franca core .

1.1.7. Pronunciation Assessment

Since the advent of the revolutionary notion of communicative competence, second language speaking proficiency has been granted a special interest in the field of second language assessment (Kang &Ginther, 2017, p .1) .With this respect, Kang & Ginther (2017) viewed pronunciation as "an essential aspect of the assessment of oral skill" , since it gives an account of the "fundamentals [involved] in the process of the construction of spoken discourse in L2 performance" (p. 1). Given the fact that pronunciation history "was a study in extremes" (Levis, 2005, p. 1), the assessment of pronunciation has evenly wavered with time; as Kang &Ginther (2017) illustrated; "in

some cases, assessment has focused on the accuracy of segmentals, in others, on the approximation or mastery of suprasegmentals" (p. 1).

More recently, pronunciation assessment has oriented towards the concepts of intelligibility, comprehensibility and accentedness as influenced by the new outlook in pronunciation research (Derwing, 1995a, 1995b; Derwing & Munro; 1997) (as cited in Thomson, 2017, p. 13). As far as the assessment of these constructs is concerned, measures of intelligibility include the orthographic transcription of L2 speech by listeners as well as comprehension questions and /or written summary tasks (Osimk, 2009) (as cited in Murphy, 2014, p. 261). For the measurement of both comprehensibility and accentedness, the measurement is conducted via the use of scales.

In the task of testing pronunciation, Richards (2015) differentiated between two approaches to pronunciation assessment: atomistic and a holistic view. The atomistic approach, as implied by its name, focuses on individual sounds, and tasks that measure its performance are usually scored as either correct or incorrect. The holistic approach, however, "focuses on the overall impression of the speaker's production" (Richards, 2015, p. 361) and usually takes the constructs of intelligibility, comprehensibility, or accentedness as yardsticks for pronunciation measurement.

As far as the tasks for assessing pronunciation are concerned, Richards (2015) distinguished between tasks of recognition and others for production:

- **Recognition tasks:** these tasks are also known as tasks of perception. To exemplify, the students may have a list of sentences or a short text and listen and mark particular sound feature (e.g. stressed syllables), students listen and tick a word from a minimal pair (e.g. what sort of book/books are you looking for) ,or students listen and mark if a sentence ends with rising or falling intonation .

- **Production tasks:** these tasks involve eliciting speech samples of the students which range from reading aloud texts to tasks that prompts natural communication. These tasks vary as follows: reading words from a list, reading a short text aloud, reading a dialogue, summarizing a story, describing a picture, answering questions, or performing a role play (Richards, 2015, p. 360).

Conclusion

This section has been devoted to give an overview about key issues related to pronunciation learning and teaching. It first clarified the distinction between the concepts of intelligibility, comprehensibility and accentedness. Then, it expounded the role of segmental features in achieving the intelligibility of speech as well as reviewing the history of pronunciation teaching and the affecting factors on pronunciation learning. Finally, this section has closed with examining pronunciation teaching models along with issues related to pronunciation assessment.

Section Three: English Speech Sound System

Introduction:

The English language is characterized by its sound system which contains a variety of speech sounds. This section, thus, introduces some key terms related to speech sound production and articulation .

1.3.1. Phonetics and Phonology

When people talk to each other, they usually seek to establish relationships for imparting information or triggering conversations. By means of speech, individuals communicate their thoughts, feelings and opinions; yet, speech or the production of the chain of sounds is such a complicated phenomenon which entails the involvement of a whole discipline to describe its processes .Accordingly, there are two sub disciplines in linguistics linked to pronunciation and sounds, namely phonetics and phonology. Both of them handle the study of speech sounds, yet, with different lens of scrutiny.

Phonetics, as defined by crystal (2008) , stands for "the science which studies the characteristics of human sound making, especially those sounds used in speech, and provides methods for their description, classification and transcription" (p. 365). Phonetics approaches its scientific study of speech sounds from three different perspectives; it studies the way speech sounds are articulated by speech organs (articulatory phonetics), the physical properties of sounds as they travel from the speaker's mouth to the listener's ear (acoustic phonetics), and the perception response to speech sounds (auditory phonetics) (Crystal, 2008, p. 365).Therefore, phonetics is not a pure linguistic field, for it "draws heavily on other scientific disciplines including anatomy, physiology, neurology, and physics" (Gut, 2009, p. 6).

Phonology , on the other hand , " is the branch of linguistics that studies the sound systems of languages" (Crystal, 2008, p. 365).while phonetics is the study of all the wide range of sounds that human vocal apparatus can produce , phonology is exclusively concerned with describing how these sounds are combined to form the sound system of a particular language. Accordingly, Gut (2009) distinguished between segmental and suprasegmental phonology. As denoted by its name, segmental phonology is concerned with speech sounds. Suprasegmental phonology is concerned with the larger units with suprass the sound level

1.3.2. Speech Production and Articulators

The journey of producing the speech sounds is mediated through the contraction of muscles of certain body parts (Roach, 1991, p. 8) .In doing so; Gut (2009) explained that there are three main systems involved in this process namely, the respiratory system, the phonatory system, and the articulatory system.

At first, given the role of air in producing speech sounds, the process of speech sound production starts up at the level of the respiratory system, that is, the lungs. The lungs function as a pump of the airstream which takes its path through the wind pipe (trachea) to reach the center of the phonatory system namely, the larynx or the voice box. At this level, the airstream interacts with the vocal cords which may take two possible positions. The vocal cords are drawn apart so the airstream can pass through without any obstruction; the sounds produced with this position are named voiceless sounds. In the second position, the vocal folds are drawn together producing voiced sounds. Once the airstream transcends the larynx, it takes its path towards the articulatory system which is often named the vocal tracts which consist of three cavities: the pharyngeal cavity , the oral cavity , and the nasal cavity .In addition; the vocal tracts consist of some ariculators

Roach (1983) identified the most important articulators that are brought to contact with the production of speech sounds which are summarized as follows:

- **Pharynx** is a tube of about 7 cm long in the women and 8 cm in men, which extends just above the larynx and ramifies at its top end into the back of the mouth and also the beginning of the way through the nasal cavity.
- **Velum,** also called the soft palate, is located in a position whereby the air passes through the nose and the mouth as well. One of the articulatory features of the velum is that it can be touched by the tongue .as a good point of reference , the sounds k and g are realized when the tongue is in contact with the lower side of the velum , accordingly , these sounds are called velar consonants
- **The hard palate**, often labeled "the roof of the mouth" which is a smooth curved surface falls in between the soft palate and the alveolar ridge.
- **The alveolar ridge** is in a position between the hard palate and the top front teeth. The sounds made with the tongue touching the alveolar ridge are called alveolar.
- **The tongue**, with its movements in different places and shapes, is another important articulator in the production of speech sounds. The tongue is divided into different parts, including tip, blade, front, back, and root.
- **The teeth**, involving the upper and lower teeth, usually contact with the tongue in the production of sounds. The dental sounds are called for sounds realized by the tongue touching the front teeth.

1.3.3. Classification of Speech Sounds

Broadly speaking, two fundamental categories can be distinguished in the classification of speech sounds namely, vowels and consonants. According to Roach (2001), within each of these two basic classes, further categories can be found. Basically,

the classification of these categories is based on the activity of speech organs involved in their production.

1.3.4. Articulatory Features of Vowels

Phonetically speaking, vowels are defined as the speech sounds which are produced with "the least obstruction of the flow of air" (Roach, 2002, p. 87). Conventionally, vowels can be described by making reference to two main elements: the tongue shape and position in addition to shape of the lips (Rogers, 2000, p. 28). Accordingly, vowels differ from each other in terms of three basic articulatory features: height, backness, and lip rounding.

- Height: it refers to the vertical distance between the upper surface of the tongue and the palate
- Backness: the part of the tongue , between the front and back , which is raised highest
- Lip rounding: the lip can be rounded, spread or neutral

1.3.3.2. Articulatory Features of Consonants

From an articulatory perspective, consonants are the speech sounds which are produced by making "a closure or narrowing in the vocal tract so that the air flow is either completely blocked or so restricted" (Crystal, 2008, p. 103). Dissimilar to the description of vowels, the classification of consonants is based on the description of the place of articulation, manner of articulation, and voicing.

- The place of articulation: it refers to where exactly the obstruction takes place in the vocal tracts.
- The manner of articulation: it refers to the type of obstruction that characterizes the production of consonant.

- Voicing: consonant sounds can be distinguished as voiced and voiceless sounds when taken into consideration the position of the vocal folds. Voiced speech sounds are produced with a vibration of the vocal folds that are brought to contact as opposed to the voiceless sounds.

Chapter Two: Research Methodology, Data analysis, and Data Discussion

Introduction

While the previous chapter has aimed to provide a comprehensive review of the major theoretical aspects of pronunciation learning strategies and pronunciation skill, the second chapter is mainly concerned with the practical framework. The present chapter, hence, comprises three main sections: the research methodology, the data analysis as well as the data interpretation section. The research methodology is discussed in the first section with an elaborate description of the research paradigm, population and sampling, research instruments, data collection procedures, and data analysis, along with the limitations of the study. As a second section, data analysis displays the main results obtained from the two research instruments. Subsequently, the discussion and interpretation of the major finding of the data analysis will be covered in the third section.

2.1. Research Methodology

The research methodology section gives an account of the research paradigm, population and sampling as well as the research design. It describes the instruments employed in this investigation, the procedures involved in data collection as well as a description of the methods of data analysis. Besides, the limitation of the study will be addressed in this section

2.1.1. Research Paradigm

This research study intends to probe into the relationship between the use of pronunciation learning strategies and pronunciation accuracy at the segmental level; given the nature of the topic under investigation, the researcher opted for a quantitative approach to data collection and analysis. Dörniey (2007) posited that “all the various quantitative

methods are aimed at identifying the relationship between variables by measuring them or manipulating them" (p. 33). As opposed to qualitative research which focuses on the study of individual instances, quantitative research is a "top down" approach which centers around the collection of quantitative data based on precise measurement of variables in order to identify relationships among these variables by means of statistical methods of data analysis.

Accordingly, in addition to the use of a pronunciation test, this study relied chiefly on the use of a questionnaire as a typical quantitative research instrument for the data collection which will provide numerical data (Dörniey, 2007, p . 24) needed for the accurate measurement of the use of pronunciation learning strategies. These numerical data will help to establish the relationship between strategy use and pronunciation scores via the use of statistical procedures performed by SPSS software.

2.1.2. Population and Sampling

The participants of this study were a total of 28 first year EFL students (24 females and 4 males) from the English department at Mohammed Seddik Ben Yahia University, jijel. Following random sampling procedures, the participants were chosen from three first year EFL classes. As the rationale for targeting this population in particular, first year students are premised to be novice EFL learners with great interest and enthusiasm to improve their pronunciation ability; this interest is supposedly fueled by their course of phonetics and phonology with its main focus on the accuracy of speech sound production. In addition, owing to the fact that pronunciation skill is generally overlooked at the secondary school level, and pronunciation instruction is still following a teacher centered approach at the university level; first year students would presumably resort to the use of pronunciation learning strategies to sustain their autonomous

pronunciation learning. Accordingly, first year EFL students will have a fresh memory about their use of pronunciation learning strategies when compared with students of from higher levels, who may be more interested in developing other language skills.

2.1.3. Research Instruments

In order to achieve the aims of the current study, a pronunciation learning strategy questionnaire as well as a pronunciation elicitation task were adopted as the two main research instruments for data collection.

2.1.3.1. Pronunciation Learning Strategy Questionnaire

For the purpose of measuring the subjects' use of pronunciation learning strategies, the researcher relied on a strategic pronunciation learning inventory which is primarily based on Likert rating scale. Besides their use in measuring opinions and attitudes in the field of social sciences, Likert scales are commonly adopted in the strategy inventory of language learning (SILL). Theses scales usually provide a group of responses for a series of statements ranging from 1 (never or almost never) to 5 (always or almost always) in order to allow the statistical measurement of learning strategy frequency of use (Oxford, 1990).

In the case of using Likert-type scales, the researcher is recommended to report the internal consistency reliability of the instrument which refers to "the extent to which items in an instrument are consistent among themselves and with the overall instrument" (Croasmun & Ostrom, 2011, p . 20). Internal reliability is measured by Cronbach's alpha coefficient. The value of this measure should exceed 0.70 in order to indicate the internal consistency of the instrument.

2.1.3.1.1. Description of the Questionnaire

In order to assess the subjects' use of pronunciation learning strategies , a questionnaire composed by Berkil (2008) on the basis of Oxford's (1990) and Peterson's (2000) classification scheme was employed for the current study **(see Appendix A)**. The questionnaire was adapted to comprise 29 items instead of 59 items from the original taxonomy **(see Appendix B)**. The items were grouped into six categories: memory (5 items), cognitive (8 items), compensation (5 items), metacognitive (5 items), affective (3 items) and cooperation strategies (3 items). The participants were asked to read carefully each statement and rate their frequency of using that strategy on a Likert scale with five categories of responses ranging from 1 to 5. As an interpretation of the values of the Likert scale , 1 stood for "never or almost never" , 2 corresponded to "rarely" , 3 stood for "sometimes" , 4 signified "often", and 5 corresponded to "always or almost always".

The internal reliability of the questionnaire was 0.77 as indicated by Cronbach's alpha coefficient of internal consistency which is an acceptable value since the measure should exceed 0, 70 (**see Appendix E**).

2.1.3.2. Pronunciation Elicitation Task

The other instrument employed in this study was a pronunciation elicitation task. In order to assess the subject's pronunciation accuracy of English segmental sounds, the researcher opted for a read aloud task. In the literature of pronunciation testing, pronunciation assessment with a focus on production rely on two types of oral production tasks: a standardized sample of the learner reading aloud in addition to tasks that elicit a sample of the subjects 'free speech (Celce-Murcia et al., 1996; Richards, 2015).

Read aloud tasks are usually written texts known as "diagnostic passages". According to Celce-Murcia et al. (1996) , the diagnostic passage is designed in such a way

which allow all or most of the segmental or suprasegmental features "which might not necessarily occur in natural speech context" to occur in the written passage (p. 345). Accordingly, the subjects' command of the targeted features can be clearly assessed. Therefore a read aloud task clearly taps into the construct of pronunciation accuracy, more particularly at the segmental level, which is the focus of the study at hand.

2.1.3.2.1. Description of the Pronunciation Task

The read aloud task comprises two diagnostic passages (**see Appendix C**). The first passage is the well-known fable of the "north wind and the sun" which is a standard short text used for the description of the phonological inventory of languages by the international phonetic association (IPA). Besides, the text is also used for providing the illustrations of the International Phonetic Alphabet in different languages (Handbook of the International Phonetic Association, 1999, p. 39). Furthermore, this text is commonly used for comparing the pronunciation of language varieties. According to Deterding (2006), the text "has proved to be an exceptionally valuable source" (p. 187), for it was used in many studies (e.g., Salbrina, 2006; Levis, 2005 as cited in Deterding, 2006).Nevertheless, Since the text is supposed to elicit all the phonemic contrasts of English language, the passage was criticized for lacking certain speech sounds in certain positions. Accordingly, Deterding (2006) suggested another well known fable, "the boy who cried wolf", as an alternative to the first text which "provides a good rage of sounds of English" (p. 193) in addition to a considerable number of minimal pairs that can be found in the text . Taken together, the use of these two fables as diagnostic tests can be such a valuable material to test the pronunciation accuracy of English speech sounds.

2.1.4. Data Collection Procedures

The data were gathered during the participants' regular oral expression sessions with the collaboration of their oral expression teachers and which went through two main stages. Prior to the first phase, the students were informed that their participation would be a contribution for a research project; in addition, the participants were guaranteed that their identities and answers would be kept confidential.

In the first stage, the researcher administered the questionnaires to the subjects and asked them the read each statement and choose the answer that describes their own behavior. After filling in the questionnaires, the procedures for the pronunciation elicitation task were organized by the help of the teacher of oral expression. At first, the subjects were asked to empty the laboratory so that each student will be assessed individually, in order to guarantee that the other students will not familiarize themselves with the words of the pronunciation elicitation texts or catch the pronunciation of their peers.

As the second stage, each subject was called to enter the laboratory individually and then he or she was given the two texts to read silently in order to get familiar with the words of the texts and also to think about the pronunciation of these words. When the participants felt ready, they were asked to read aloud each text so that their pronunciation can be recorded. Once finishing from the read aloud task, the students were required to hand in their questionnaire in order to code it with a label which would correspond to their pronunciation recording. In fact, two groups of first year students followed the above mentioned data collection procedures. Since these procedures were time consuming, meetings with other students from another group were arranged in their free time in order to ensure that the sample was not restricted to students from only two groups.

2.1.5. Data Analysis

The data gathered from the two research instruments were analyzed quantitatively by means of the statistical package of social sciences (SPSS, version 21). As Dörniey (2007) pointed out, the defining characteristic of quantitative research is the use of the statistical analysis which ranges from the use of descriptive statistics (calculating the mean scores of variables) to the use of inferential statistics (making inferences to a population larger than the sample).

To answer the first research question which aims to investigate the subjects' use of pronunciation learning strategies, descriptive statistics of the participants' frequency of using the overall PLS and each subcategory of strategies were calculated in order to find the level of use of the overall strategies in addition to each subcategory of strategies along with the most frequently used strategies and least frequently used ones (**see Appendix E**).

As far as the analysis of the pronunciation elicitation task is concerned, the researcher took an atomistic approach for the assessment (Richards, 2015). That is, the main focus was to assess the accurate production of individual sounds in order to identify the number of incorrect sounds the subjects exhibited in their production. Put more plainly, the pronunciation accuracy was measured by the number of phonemic errors students made in their production task. The focus on phonemic errors rather than phonetic ones has a theoretical and a practical reason. As a theoretical reason, phonemic errors are more important than phonetic ones since phonemic errors are found to affect intelligibility, comprehensibility and also accentedness ratings whereas phonetic errors emerged to only affect accent ratings (Munro & Derwing, 1995a) (as cited in Thomson, 2018). The practical reason lies in the fact that phonetic errors are only identified through the use of acoustic software

As a third phase in the data analysis, Pearson product -moment coefficient (*r*) was calculated in order to examine the linear relationship between the participants' frequency of using PLS and their pronunciation accuracy as measured by their number of phonemic errors in the pronunciation production test. Generally speaking, correlation analysis is the statistical procedure which "looks at how two measurements vary together" (Larson- Hall, 2010, p. 131). In order to choose this statistical test, the correlation should measure the relationship between exactly two continuous variables which do not have levels within them. In addition, the variables are independent from each other, although they can have a cause and effect relationship (Larson-Hall, 2010, p. 131).

According to Dörnyei (2007), the correlation coefficient determines the strength and the direction of the relationship with a value which can range from (-1 to +1). In fact, the positive or negative sign of the correlation indicates only the direction of the relationship; that is, the positive sign indicates that the two variables vary in the same direction; reversely, the negative sign denotes that the variables vary in different directions. Another important issue in correlation analysis is the statistical significance of the correlation; that is, the result is reliable and true for the larger population. Dörniey (2007) explained that the significance of the result is measured by a probability coefficient (*p*). A result is said to be significant if the *p- value* is lower than 0.05 or 0.01 levels (*$p < 0, 05$ or **$p < 0, 01$).

2.1.6. Limitations of the Study

During the process of conducting this research project, a number of constraints appeared to hinder the accomplishment of this research study; in fact, the following limitations need to be highlighted:

- Owing to the fact that data collection procedures were conducted fifteen days before the second semester's exam, the researcher found difficulties in collecting the data in oral session classes since the students were busy with their workshop exams. Consequently, the sampling was limited to only three out of seven first year groups.
- One of the major limitations of this study is due to the nature of testing the students' pronunciation accuracy. In fact, the researcher managed to target only 28 first year students as a sample for population since testing each subject in isolation and recording his /her pronunciation took a considerable amount of time.
- Due to time constraints, the researcher relied chiefly on quantitative data collection instruments; therefore, another qualitative research instrument (e.g., interviews) is likely to give other insights about the use of pronunciation learning strategies and accordingly triangulate the result of the quantitative data analysis.
- Given the small sample size, findings of this study might not be representative of the whole population of first year students. As a result, the picture of the use of pronunciation learning and its relationship with pronunciation ability is still incomplete.

Conclusion

This section has accounted for a thorough discussion of the research methodology followed in this study. In addition to highlighting the research paradigm and sampling, this

section was also devoted to the description of the research instruments, data collection procedures and data analysis with giving special reference to the major limitations of the study.

Section Two: Data analysis

Introduction

This section is exclusively devoted to the analysis of the two research instrument employed in this study namely, the pronunciation learning strategy questionnaire and the pronunciation elicitation task. In order to meet the objective of this study, this section is additionally devoted for the statistical analysis of Pearson's correlation coefficient between the frequency of using pronunciation learning strategies (PLS)and the number of phonemic errors identified in the pronunciation elicitation task.

2.2.1. Analysis of the Questionnaire

A. Background Information

1. Age:

Table 2

Age of the Subjects

Age category	Percentage (%)
17-20	20
21-24	7
25-28	1
Total	28

From the above given data, it appears that the sample of the study is homogeneous in terms of age. That is, the age factor is not going to affect the participants' experience in using pronunciation learning strategies in their pronunciation learning.

B. The Measurement of Pronunciation Learning Strategy Use

The use of the questionnaire was meant to measure the frequency of using pronunciation learning strategies by 28 first year EFL learners and their level of use. By means of descriptive statistics, the mean frequencies of the subjects' responses on each statement in the questionnaire on a 5-point Likert scale (never or almost never, rarely, sometimes, often, always or almost always) were calculated in order to identify the level of use of the overall pronunciation learning strategies along with the use of each subcategory of strategies. The measurement of the level of use is based on Oxford's (1990; 291) guidelines for the use of language learning strategies.

The following table summarizes Oxford's (1990) guidelines for measuring the strategy level of use:

Table 3

Key to Understand the Mean and Level of Use of Strategies

Mean scores	Level of use
1,0 - 2,4	Low
2,5 -3,4	Medium
3,5 -5,0	High

1. The Measurement of Memory Strategies

This section of the questionnaire aimed to measure the level of use of memory strategies.

Table 4

Descriptive Statistics for the Use of Memory Strategies

Item N°	N	Mean	SD	Level of use
1	28	2,28	.223	Low
2	28	2,67	.277	Medium
3	28	3,92	.162	High
4	28	3,32	.291	Medium
5	28	3,71	.217	High
Total	28	3,18	.09	Medium

Note. SD = Standard of deviation .N = number of participants

As the table exhibits, the overall use of strategies in memory subcategory is reported to be at a medium level of use. The item 1 (I use phonetic symbols or my own codes to remember how to pronounce words) fell into the low level of use while item 2 (I make songs or rhythms to remember how to pronounce words) and item 4 (I try to recall how my teacher pronounced a given word) fell into the medium level of use. Interestingly, item 3 (I memorize the pronunciation of new words when I associate them with a situation in which I heard them) along with item 5 (I practise a difficult word over and over) reported a high level of use .

2-The Measurement of Cognitive Strategies

The second section of the questionnaire comprises eight items of cognitive strategies; the following table summarizes the result obtained for this section:

Table 5

Descriptive Statistics for the Use of Cognitive Strategies

Item N°	N	Mean	SD	Level of use
6	28	3,64	.231	high
7	28	4,21	.194	high
8	28	3,32	.267	medium
9	28	2,85	.222	medium
10	28	3,92	.191	high
11	28	3,92	.223	high
12	28	3,64	.247	high
13	28	3,85	.216	high
Total	28	3,67	.11	high

Note. SD = Standard of deviation .N = number of participants

As data show, the subjects reported a high level of use of the total strategies in the cognitive subcategory. Remarkably, only item 8 (I read out loud words, paragraphs, or passages) and item 9 (I do exercises and practise sounds at first in isolation and then in context) fell into medium level of use. It can be said that the participants rely heavily on the use of cognitive strategies in their pronunciation learning.

3 -The Measurement of Compensation Strategies

Table 6

Descriptive Statistics for the Use of Compensation Strategies

Item N°	N	Mean	SD	Level of use
14	28	2,89	.27	Medium
15	28	3,46	.22	Medium
16	28	3,82	.21	High
17	28	2,89	.30	Medium
18	28	3,00	.25	Medium

The above statistics reveal that the overall use of compensation strategies fell into medium level of use. At the level of each strategy, four out of five strategies were found to have a medium level of use with only one strategy fell into the high level of use (I use synonyms of words that I have difficulty in pronouncing).

4- The Measurement of Metacognitive Strategy Use

The fourth section of the questionnaire explores the use of metacognitive strategies; the following table reports the statistics calculated for this section:

Table 7

Descriptive Statistics for the Use of Metacognitive Strategies

Item N°	N	Mean	SD	Level of use
19	28	2,67	.281	Medium
20	28	3,85	.203	High
21	28	3,82	.230	High
22	28	3,10	.201	Medium
23	28	2,89	.268	Medium
Total	28	3,04	.17	Medium

Note. SD = Standard of deviation .N = number of participants

In light of the participants' responses in the fourth section, the level of use of the overall metacognitive strategies is reported to be medium. Besides, two out of five strategies belong to the high level of use (I notice my pronunciation problems and try to overcome them, M=3, 85; I look up the pronunciation of new words in the dictionary while preparing for a presentation or talk in English, M= 3, 82) the other remaining strategies fell into the medium level of use.

5. The Measurement of Affective Strategy Use

The fifth section of the questionnaire aimed to measure the use of affective strategies; the result of the statistical analysis is summarized in table below:

Table 8

Descriptive Statistics for the Use of Affective Strategies

Item N°	N	Mean	SD	Level of use
24	28	3,42	.264	Medium
25	28	4,14	.216	High
26	28	3,32	.192	Medium

Note. SD = standard of deviation .N = number of participants

The above table shows that the participants' overall use of affective strategies is high; two out of three strategies fell into the medium level of use while the remaining ones are reported to have a high level of use (I encourage myself to speak English even when I am afraid my pronunciation is not good , M= 4,14) .

6-The Measurement of the Use of Cooperation Strategies

Table 9

Descriptive Statistics for the Use of Cooperation Strategies

Item N°	N	Mean	SD	Level of use
27	28	2,75	.215	Medium
28	28	3,25	.270	Medium
29	28	3,14	.250	Medium

Note. SD = standard of deviation .N = number of participants

The above given statistics show that the participants use both the overall cooperation strategies and also each item at a medium level. Apparently, no strategy is reported to have a high level of use.

7-The Measurement of the Overall Strategy Use

Table 10

Descriptive Statistics for the Overall Strategy Use

Items	N	Mean	SD	Level of use
Overall PLS	28	3,37	.08	medium

Note. SD = standard of deviation .N = number of participants

On the whole, the average mean score of the participant's use of the overall pronunciation learning strategies fell into the medium level of use.

8-A Comparison between the Use of the Six Subcategories

Table 11

The Subjects' Mean Frequency of Using Each Subcategory and its Ranking

Part	PLS	N	Mean	SD	Ranking	Level of use
A	memory	28	3,18	.09	5	Medium
B	Cognitive	28	3,67	.11	1	High
C	Compensation	28	3,21	.15	4	Medium
D	Metacognitive	28	3,27	.17	3	Medium
E	Affective	28	3,63	.16	2	High
F	Cooperation	28	3,04	.16	6	Medium

On the one hand, the data from the descriptive statistics of the questionnaire show that the participants have a clear preference towards the use of cognitive (M= 3, 67) and affective strategies (M=3, 63) which are both reporting a high level of use .On the other hand, cooperation (M =3, 04) and memory subcategory(M= 3,18) were found to be the least frequently used strategies .This can be shown in the following chart :

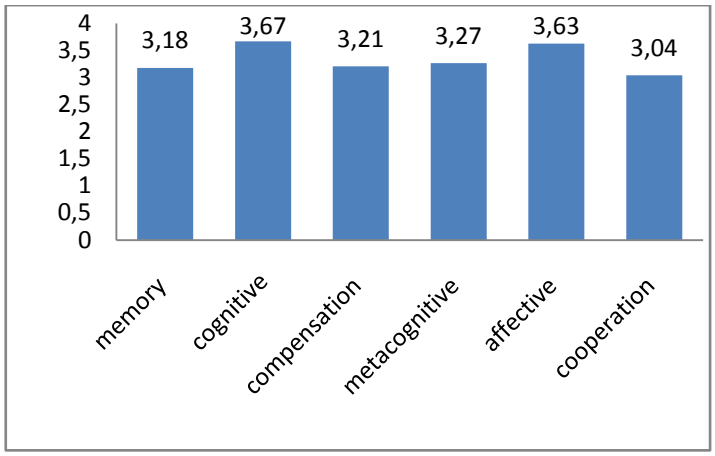

Figure 1. Comparison between the mean scores of the six subcategories

9. The Five Most Frequently Used Strategies

Table 12

The Five Most Frequently Used Strategies

Strategy	Type	Mean
1. Listening intensely to tapes , music and watching movies in English	Cognitive	4,21
2. Encouraging oneself to speak English even if pronunciation is not good	Affective	4,14
3. Concentrating intensely on pronunciation while speaking or listening	Cognitive	3,92
4. Practicing how to say a given word in mind before speaking	Cognitive	3,92
5. Paying attention to errors made by others	Cognitive	3,85

The above table exhibits , the participants ' responses showed a clear preference towards *listening intensely to tapes , music and watching movies in English* (M= 4,21) as a cognitive strategy ,closely followed by *encouraging oneself to speak in English regardless of one 's pronunciation level* (M=4,14) as an effective strategy . Remarkably, the other three most frequently used strategies belong to the cognitive subcategory. That is, the

participants tend to *concentrate intensely to pronunciation while speaking and listening* (M=3,92) , *practicing how to say a given word in mind before speaking* , and also *paying attention to errors made by others* .

10. The Five Least Frequently Used Individual Strategies

Table 13

The Five Least Frequently Used Strategies

Strategy	type	Mean
1. Using phonetic symbols to remember the pronunciation of words	Memory	2,28
2. Making songs or rhythms to remember the pronunciation of words	Memory	2,67
3. Evaluating progress in pronunciation by recording oneself and comparing it with that of native speakers	metacognitive	2,67
4. I ask someone else to correct my pronunciation	cooperation	2,75
5. Practising sounds in isolation and then in context	Cognitive	2,85

As far as the five least frequently used strategies are concerned, *using phonetic symbols* (M=2, 28) and *making songs or rhythms to remember the pronunciation of words* (M=2, 67) are the least popular strategies employed by the participants which are both subsumed under the memory subcategory. In addition, *evaluating progress by recording oneself* as a metacognitive strategy (M=2, 67), asking someone else for correction as a cooperation strategy (M=2, 75), and also practising sounds in isolation and then in context as a cognitive strategy

2.2.2. The Analysis of the Pronunciation Elicitation Task.

For the purpose of measuring the subjects 'pronunciation accuracy, a read aloud task was employed as the second main research instrument. In the present study, pronunciation accuracy is measured as the number of phonemic errors found in the subjects 'production. In order to identify and count the number of mispronounced sounds, a comparative process was followed between the subjects' and a standard native production **(see Appendix D**). The aspects related to the suprasegmental level and rhoticity were not taken into consideration.

2.2.2.1. Description of Major Phonemic Errors made in the First Diagnostic Passage

Table 14

The Most Frequent Phonemic Errors made in the First Diagnostic Passage

Word	Type of phonemic errors		
	Substitution	Omission	Addition
North	/θ/ → /d/		
wind	/ɪ/ →/ aɪ/		
Were	/ə/→ /eə/		
disputing	/ˌjuː/ → / ˌjʊ/	/ˌj/	
traveler		/ə/	
came	/eɪ/→/æ/		
Wrapped	/æ/→/eɪ/. /t/→ /ɪd/		
Cloak	/əʊ/→ /ɒ/		
agreed	/ə/ → /æ/		
Succeeded	/ ə /→/ʌ/. / ɨ/→ / ɪ/	/ɪd/	
Considered	/ə/→ /ɒ/		
Other	/ʌ/→ /ɒ/		
Blow	/b/→ /p/ /u/→ /aʊ/		
	/u/ → /əʊ/		
Closely	/ʂ/ →/z/		
Fold	/əʊ/→/ɒ/		
	/ʊ/		
Last	/ɑ/→/ ɪ/		
Gave	/eɪ/→ /æ/		
attempt	/ə/→ /æ/	/t/	
immediately	/ɪə/→ /ɪæ/		
Obliged	/ə/ →/ɒ/ . /aɪ / → /ɪ/		/d/ → /ɪd/
	/dʒ/ → /ʒ/		
Confess	/ə/→/ ɒ/ ./ e/→ / ɪ /		

2.2.2.2. Description of the Major Phonemic Errors made in the Second Diagnostic Passage

Table 15

The Most Frequent Phonemic Errors Made in the Second diagnostic Passage

Word	Type of Phonemic Errors		
	Substitution	Omission	Addition
The	/ð / → /d/		
Poor	/ʊə/ → /aʊə/		
Shepherd	/e/→ /ı/ , /p/ → /f/		/ə/
boy	/ɔı/ → /u:/		
flocks	/ɒ/ → /ʊ/	/ʂ/	
Fields	/i:/ → /aı/		
foot	/ʊ/ → /u:/		
mountain	/aʊ/→/ə/ /ə/ → /eı/		
Thought	/θ/→ /t/		
	/θ/→ / d/ /ɔ:/ → /ɒ/		
Company	/ʌ/ → /ə/ /ə/→/æ/		
Raising	/ei/→ /aı/ /z/→/ʂ/		
Fist	/ı/→/ɜ:/		
	/aı/		
Air	/eə/→ /aı/		
village	/ı/→ /æ/		
shouting	/aʊ/ → /ʊ/		
wolf	/ʊ /→ /ɔ:/		
heard	/ɜ:/→ /i:/		
Villagers	/ı/→ /æ/ /dʒ/→ /ʒ/		
rushed	/ʌ/→ /ı/ /t/→ /ıd/		
their	/ð/→ /d/ /eə/→ /i:/		
concern	/ə/→ /ɒ/ /ɜ:/→ /ə/		
cousins	/ʌ/ →/ʊ/ /ə/→ /ı/		
even	/i:/→ /e/		
while	/aı/→ /ı/		
pleasure	/e/→ /ı/ /ʒ/ → /dʒ/		
tried	/aı/→ /i:/		
later	/eı/→ /æ/		
once			
successful	/ə/→ /ʌ/	/ʂ/	
Escaped	/eı/→ /æ/ /t/→ /d/		
Diet	/aıə/ → /i:/		
fear	/ıə/ → /eə/		
shot	/ɒ/→ /ʊ/		
Began	/æ/→ /e/		
Threaten	/θ/→ /t/ /e/→ /ı/		
sheep	/i:/ → /ı/		

Table 15

Continued

racing	/eɪ/ → /aɪ/	
Cried	/aɪ/→ /iː/	/e/
Unfortunately	/ə/ → /eɪ/	
Convinced	/ə/→ /ɒ/ /ɪ/ →/aɪ/ /t/→ /ɪd/	
actually	/ə/ → /ʊə/	
third	/θ/→/t/ /ɜː/→/iː/	
bother	/ɒ / →/əʊ/ / ð/→ /θ/	
feast	/iː/ → /ɪ/	

2.2.2.3. Descriptive Statistics for the Number of Phonemic Errors

Table 16

Descriptive Statistics for the Number of Phonemic Errors

	N	Minimum	Maximum	Mean
Phonemic errors	28	1,00	51,00	22,5357

Note. N= number of participants

The above given statistics show the average of making phonemic errors (M = 22, 53) for all the participants in both of the two texts. In addition, the highest number of phonemic errors reached 51misponounced sounds and the lowest number of phonemic errors equals to only one mispronounced speech sound.

2.2.3. Correlation Analysis between the Frequency of Strategy Use and the Number of Phonemic Errors

In order to determine whether there is a relationship between the use of pronunciation learning strategies (PLS) and pronunciation accuracy as measured by the number of phonemic errors of the participants in the pronunciation elicitation task, Pearson

Product - Moment correlation Coefficient (*r*) was calculated to investigate the statistical relationship between the frequency of using the overall PLS, each subcategory of PLS, and each individual strategy with the number of phonemic errors.

2.2.3.1. The Correlation Analysis for the Overall Use of Pronunciation Learning Strategies.

Table 17

Correlations Between the Overall Use of Strategies and the Number of Phonemic Errors

Variable		Overall PLS
Number of phonemic errors	Pearson correlation	.139
	Sig (P- value)	.481
	N	28

The correlation between the frequency of using the overall PLS and the number of phonemic errors identified from the pronunciation test was found to be statistically insignificant (*r*=. 139, ρ = .481, *ns).*This result indicates that there is no relationship between the frequency of using the overall pronunciation learning strategies and pronunciation accuracy.

2.2.3.2. Correlation Analysis for the Use of the Six Subcategories

Table 18

Correlations between the Use of the Six Subcategories and the Number of Phonemic Errors

Variable		Mem	Cog	Comp	Meta	Affec	Coop
Number of phonemic errors	Pearson correlation	.438*	.-178	.384*	.233	-495**	.197
	Sig (P – value)	.020	.364	.044	.234	.007	.314
	N	28	28	28	28	28	28

Note. *ρ < . 05. ** ρ <.01

In contrast to the overall use of strategies, the frequencies of using three out of the six PLS subcategories were found to correlate significantly with the number of phonemic errors namely, memory (r=.438 , ρ =.02, ρ< .05) , cooperation (r=.384 , ρ = .04 , ρ < .05) and affective strategies (r= -.495 , ρ = .007 , ρ< .01) . Remarkably, memory and compensation strategies reported a positive correlation between the frequency of using these strategies and the number of phonemic errors whereas affective strategies reported a negative correlation with the number of phonemic errors .This result suggests that the increase in the frequency of using memory and compensation categories is paralleled with an increase in the number of phonemic errors. That is, the increase in the frequency of using memory and compensation strategies is associated with a decrease in pronunciation accuracy. Put more simply, compensation and memory strategies are more frequently used by students with lower levels of accuracy.

As far as the affective subcategory is concerned, the result of the negative correlation revealed that the increase in the frequency of using the affective strategies is associated with a decrease in the number of phonemic errors .That is , the result indicates that the affective subcategory strategies are more frequently used by students with higher levels of accuracy.

2.2.3.3. Correlation Analysis for the Use of Individual Strategies

Overall, there were 7 out of 29 strategies which showed statistically significant associations with pronunciation accuracy as measured by the number of phonemic errors. Four strategies were found to correlate positively while the other three strategies correlated negatively with the number of phonemic errors.

2.2.3.3.1. The Positive Correlations

Table 19

Positive Correlations of Strategies with the Number of Phonemic Errors

Category	Strategy	Pearson correlation	ρ –value
Memory	Making songs or rhythms to remember pronunciation	.487**	.009
Memory	Trying to recall how the teacher pronounced a given word	.401*	.035
Compensation	Avoiding saying words with difficult pronunciation	.378*	.047
Compensation	Asking someone to pronounce a difficult word	.418*	.027

Note. *ρ <. 05. **ρ<.01

Through the examination of the above table, four out of 29 items reported a positive correlation with the number of phonemic errors. Expectedly, these strategies were found to belong equally to both the memory and compensation strategies. Accordingly, the use of the above stated strategies is more frequent by the students who made more phonemic errors.

2.2.3.3.2. The Negative Correlations

Table 20

Negative Correlations of Strategies with the Number of Phonemic Errors

Category	Type	Pearson correlation	ρ-value
Cognitive	Listening intensely to tapes ,music and watching movies	-.511**	.005
Affective	Encouraging oneself to speak in English even if the pronunciation is not good	-.386*	.043
Affective	Taking risks in pronouncing words regardless of making mistakes	-.437*	.020

Note. $*\rho < .05$. $** \rho < .01$

From the above given data, it can be shown that three out of 29 strategies of the PLS scale reported a significant negative correlation with the number of phonemic errors. In addition to the two affective strategies (self encouragement and risk taking), the result revealed the correlation of another strategy which belongs to the cognitive subcategory (intensive listening). The negative correlations indicate that the above mentioned strategies are more frequently used by the students who did fewer errors. That is these strategies are more applied by higher accuracy students.

Conclusion

This section has taken as its major concern the analysis of the two main research instruments which provided the numerical data for the correlation analysis between the frequency of using pronunciation learning strategies and pronunciation accuracy. The analysis of pronunciation learning strategy questionnaire revealed the pronunciation

learning strategies are used at a medium level of use. In addition, cognitive and affective strategies were found to be more frequently used types of strategies. Besides, the pronunciation elicitation task was used to measure the subjects' pronunciation accuracy which was operationalised as the number of phonemic errors. Eventually, this section has been also devoted to display the result of the statistical analysis of the correlation between the overall use of PLS ,the use of each subcategory along with the use of individual strategies with the pronunciation accuracy as measured by the number of phonemic errors in the pronunciation elicitation task . As the most conspicuous result emerging from the statistical analysis ,no relationship was found between the use of pronunciation learning strategies and pronunciation accuracy . However, memory and compensation and affective strategies were reported to correlate with pronunciation accuracy along with other seven individual strategies. Hence, the discussion and interpretation of these results will be covered in the following section.

Section Three: Data Discussion and Interpretation

Introduction

The present study sought to shed light on the use of pronunciation learning strategies by first year EFL learners at Mohammed Seddik Ben Yahia University. More importantly, the study intended to explore the relationship between the use of pronunciation learning strategies and pronunciation accuracy at the segmental level. In order to draw the conclusions about the major findings yielded from the current study, the present section sets the ground for the discussion and interpretation of the main results obtained from the data analysis section. The discussion of the major findings will be outlined to meet the answers of the following main research questions:

1. Which pronunciation learning strategies do first year EFL learners employ in their pronunciation learning?

2. Is there a relationship between the use of pronunciation learning strategies and pronunciation accuracy at the segmental level?

2.3.1. The Use of Pronunciation Learning Strategies

The analysis of the data unveiled the general picture of the use of pronunciation learning strategies by 28 first year EFL learners in terms of the level of use of the overall strategies in addition to the use of each subcategory of strategies . The data analysis also uncovered the most frequently used subcategories along with the most and least preferred individual strategies.

2.3.1.1. The Overall Use of Pronunciation Learning Strategies

In terms of the frequency of using Pronunciation learning strategies, the findings of the present study reported a medium level of use (M = 3, 37) for the overall strategies in the PLS inventory. The medium level of use of strategies which is closely at the boundaries of high level of use (M< 3, 50) hints at the interest of first year students in improving their pronunciation via making use of PLS. Presumably, the students level of use is likely to rise along the course of learning English pronunciation at university .This view , hence , is barely distinguishable from that of Berkil (2008) who attributed the medium level of use of her first year ESL students to the lack of previous pronunciation courses prior to their studies at university .

2.3.1.2. The Use of the Six Subcategories of Pronunciation Learning Strategies

As far as the use of the six subcategories is concerned, the result showed that cognitive strategies (M= 3, 67) and closely followed by the affective ones (M=3, 63) came as the first and second most frequently used subcategories of pronunciation learning strategies. Besides, cooperation strategies were found to be the least frequently used (M= 3, 04). In terms of the level of use, four out of six subcategories fell into the medium level of use namely, memory, compensation, metacognitive, and cooperation strategies. Interestingly, both cognitive and affective strategies reported a high level of use. Apparently, this result seems consistent with previous findings in language learning strategy literature (LLS) and also pronunciation learning strategy (PLS) research. Indeed, cognitive strategies are generally considered the most frequently used LLS by ESL learners (Chamot & Kupper, 1989; O'Malley, Chamot, Stewner, Kupper, & Russo, 1985a; Oxford, Park-Oh, Ito, & Sumrall, 1993 as cited in Peterson, 2000, pp 4- 5). Of equal interest, the

result appears to share common ground with Berkil (2008) who found that the affective strategies are the most frequently used PLS by the subjects of her study.

Strikingly important, the high level of use of both affective and cognitive strategies lends support to Arnold and Brown‘s (1999) view that the “ affective side of learning is not in opposition with the cognitive side … neither the cognitive nor the affective has the last word, and indeed , neither can be separated from each other ” (p . 1). Put differently, the high frequency of using both cognitive and affective strategies reflects the interplay between the cognitive and affective side of learning.

2.3.1.3. The Most and Least Frequently Used Individual Strategies

Another analysis of the data exhibited the most and least frequently used individual strategies employed by the subjects of the study. *Using phonetic symbols to remember the pronunciation of words,* as a memory strategy, was identified as the least popular and also the only strategy with the low level of use (M= 2, 28).Presumably, first year students have a relatively short experience with using phonetic symbols since they have been thoroughly familiarized with phonetic transcription only at the university level in their course of phonetics and phonology. As far as the most popular strategy is concerned , *listening to tapes, music and watching movies* appeared to be the most frequently used strategies with the highest level of use (M = 4,21) . Apparently, this finding concurs well with the view that perception precedes production. That is, students tend to favor listening to the target language in order to familiarize themselves with its pronunciation.

2.3.2. The Relationship between Pronunciation Learning Strategy use and Pronunciation Accuracy

The relationship between the use of pronunciation learning strategies and pronunciation accuracy is analyzed at the three levels of use: the overall use, the use of each subcategory, and the use of each individual strategy.

2.3.2.1. The Relationship with the Overall Use of Strategies

When examining the relationship between the extent of using pronunciation learning strategies and pronunciation accuracy as measured by the number of phonemic errors that the subjects did in the pronunciation elicitation task, no significant correlation was found in terms of the frequency of using the overall pronunciation learning strategies. Accordingly, this observation can give ground to refute the first hypothesis which stated that there is a relationship between the frequency of using the overall pronunciation learning strategies and pronunciation accuracy in addition to the second hypothesis which stated that higher accuracy students use pronunciation learning strategies more frequently than lower accuracy students.

Interestingly, the result of the present study correlates fairly well with previous findings in the literature (i.e., Berkil, 2008; Rokoszewska, 2012). Indeed, in Berkil‘s (2008) study, no significant relationship was found between the use of PLS and pronunciation ability in terms of using the overall strategies. Similarly, Rokoszewska (2012) reported no relationship between the use of PLS and the perception of English vowels; yet, a weak positive relationship was observed between the use of PLS and the production of English vowels.

Taken as a whole, it can be understood that second and foreign language pronunciation ability, either at holistic or at segmental level, is not significantly associated with the frequency of using the entire pronunciation learning strategy inventory.

2.3.2.2. The Relationship with the Use of Each Subcategory

Dissimilar to Berkil' s (2008) findings which reported no relationship between pronunciation ability and the use of each subcategory of strategies , the findings of this present study revealed a significant relationship between the use of three out of the six subcategories of strategies with pronunciation accuracy namely , memory , compensation, and affective subcategories.

In fact, two types of relationships were identified as the most conspicuous results to emerge from the data. As the first type of the relationship, both memory and compensation strategies were found to be more frequently applied by students with lower levels of accuracy. Arguably, the result linked to compensation strategies appears to be plausible since the use of these strategies is typical for lower proficiency learners who seek to overcome their knowledge gap and insufficiency. Concerning the intriguing correlation of memory subcategory, it can be reasonably assumed that students of lower levels of accuracy are recognizing the need to improve their pronunciation, so they are approaching their pronunciation learning through the use of memory strategies. This finding can reflect the need of lower accuracy students to practice sounds in memory.

As far as the second type of the relationship is concerned, the affective strategies emerged to be more frequently used by students with higher levels of accuracy. Strikingly interesting, this result appears to be well supported by the role of the affective domain in pronunciation learning. According to Jedynak (2013), "affectivity seems to be relevant to any discussion on successful attainment in the phonetic /phonological domain" (p. 60).

Overall, the findings of the present study show that the relationship between the frequency of using pronunciation learning strategies and pronunciation accuracy can be observed at the level of the use of each subcategory of pronunciation learning strategies.

2.3.2.3. The Relationship with the Use of Each Individual Strategy

The findings at the level of each individual items revealed which strategies in particular that had a relationship with pronunciation accuracy .Among the 29 strategies , the results showed that making songs and rhythms to remember the pronunciation of words in addition to trying to recall the teacher ‘s pronunciation were the two memory strategies which were more frequently used by students with lower levels of accuracy .In similar fashion, two compensation strategies namely, avoiding saying words with difficult pronunciation and also asking for pronunciation help were found to be more frequently applied at lower levels of accuracy. The reasons for these findings can be clearly understood; students with lower levels of accuracy may look at their teachers as models for correct pronunciation. In addition, they avoid saying words in favor of asking for help in order to compensate their pronunciation deficiency. Another explanation which accounts for these findings is relevant to the use the strategy of “making songs and rhythms to remember”; in parallel with emerging as the second least frequently used strategy , this strategy additionally appeared to be the more frequently used at lower levels of accuracy. It can thus be hypothesized that this strategy is not adopted as an effective strategy by students with higher levels of accuracy since they do not need to practice sounds in memory because they have reached a certain level of automaticity in their pronunciation.

Surprisingly, one of the findings of this study seems to be inconsistent with Eckstein’s (2007) study; while the present study reported that “asking for pronunciation help” strategy was more frequently applied at lower levels of accuracy, Eckstein (2007)

found that this strategy correlates significantly with scores of higher pronunciation proficiency learners.

Additionally, the analysis at the level of individual strategy use showed that taking risks in pronunciation and encouraging oneself, as two affective strategies, were more frequently used by students with higher levels of accuracy. In a similar vein; listening to tapes, music and watching movies, as a cognitive strategy, was another strategy which was more frequently used by students with higher accuracy levels.

In fact, the analysis at the level of each strategy can reveal many facts about the interplay between the use of pronunciation learning strategies and foreign language pronunciation learning. As Jedynak (2013) posited , the learning of foreign language pronunciation is fraught with negative and positive emotions ; accordingly, pronunciation learning is strongly related to the affective domain which subsumes a bundle of individual characteristics including , self esteem , inhibition, , risk taking , anxiety , and extroversion and motivation (Brown , 2000 as cited in Jedynak , 2013).

When trying to mirror these characteristics on the use of pronunciation learning strategies, it can be assumed that compensation strategies which were found to be more frequently used by students with lower levels of accuracy operate as an avoidance strategy towards making errors and eventually maintaining the self image. As Jedynak (2013) submitted, errors can instill in the adult learner the fear of looking foolish in addition to having a lower self-image (p. 62). In contrast, students with higher levels of accuracy were reported to more frequently use the affective strategies of self-encouragement and risk - taking". Indeed, these two strategies appeared in Rubin's (1975) profile of good language learners' strategies as extroverted and uninhibited about mistakes (as cited in Wray & Hajar, 2015).

Another substantial finding of this study pertains to the use of the cognitive strategy of intensive listening to tapes and music and watching movies. As the findings showed, the use of intensive listening is more frequent at higher levels of accuracy .This result provide further evidence for the role of exposure for successful pronunciation attainment. Additionally, this finding supports the role of Sardegna's (2009) critical listening strategy which subsumes her strategy training model.

In a nutshell, the findings of the present study show that there is no relationship between the overall use of pronunciation learning strategies and pronunciation accuracy at the segmental level. Nevertheless, this relationship is found at level of using certain subcategories and individual strategy use. More specifically, there is a correlation between the use of memory, compensation and affective strategies. On the one hand, four strategies correlated with lower accuracy levels namely, making songs to remember, trying to recall teacher's pronunciation, avoiding saying difficult words and asking for pronunciation help. On the other hand, three strategies correlated with higher accuracy levels namely, listening intensely to tapes music and tapes, encouraging oneself, and taking risks in pronunciation.

2.3.3. Pedagogical Recommendations for Pronunciation Learning Strategy Use

Although there is no relationship between the overall use of pronunciation learning strategies and pronunciation accuracy, the following recommendations are based on the findings yielded from the correlation analysis of strategy use at the individual level.

- Lower accuracy students should rely intensely on listening to native like models.
- Teachers are recommended to incorporate the use of authentic materials for teaching phonetics and phonology and vary the teaching practices.
- Teachers should encourage their student to talk in the English and boost their self confidence.

Conclusion

This section has been devoted to discuss the major findings that sprung up from the data analysis section. Primarily, it aimed to give a detailed picture of the use of pronunciation learning strategies in addition to the major findings pertinent to the relationship between the use of these strategies and pronunciation accuracy. This relationship has been discussed at three major levels: the overall strategy use level, the subcategory use level along with the use at the individual level.

General Conclusion

Modern perspectives on foreign language teaching and learning are underscoring the pivotal role of the learner in the teaching and learning process. Traditionally, this role has long been overshadowed by the earlier dominant paradigm of teacher-centered education. Therefore, the interest into demystifying the behaviors of good language learners has given importance to strategy use in achieving successful foreign language attainment. Such role, however, is still bleary in relation to mastering different aspects of pronunciation skill. With the growing interest in targeting the features that account for the intelligibility of speech, mastering the segmental features of phonology is a prerequisite in a foreign language learner's pronunciation. Hence, the question of whether the use of learning strategies has a relationship with exhibiting an accurate production of English segmental sounds emerged as a knowledge gap in pronunciation learning strategy research.

The present research study, then, is an attempt to widen the current knowledge about the use of pronunciation learning strategies and its relationship with pronunciation accuracy at the segmental level. Being divided into three sections, the first chapter reviews the major theoretical issues related to pronunciation learning strategies, pronunciation learning and teaching along with the English sound system, respectively. Equally divided into three sections, the second chapter introduces the research methodology in the first section, in addition to the statistical analysis of the two research instruments and the correlation analysis in the second section. Lastly, the discussions of the major findings are covered in a separate third section.

With a special reference to first year EFL learners, it was hypothesized that there is a relationship between the overall use of pronunciation learning strategies and pronunciation accuracy at the segmental level; more precisely, the use of pronunciation learning strategies is more frequent with the students with higher accuracy levels. To test this hypothesis, two research instruments were implemented namely, a pronunciation learning strategy questionnaire and a pronunciation elicitation task. The pronunciation learning strategy questionnaire was used to uncover the strategies that first year EFL learners employ in their pronunciation learning. Besides, the students' pronunciation accuracy was operationalised as the number of phonemic errors made in the pronunciation elicitation task.

The findings of the analysis of the pronunciation strategy questionnaire firstly indicated that first year EFL students' use of pronunciation learning strategies is medium. Among the six pronunciation learning strategy subcategories, the subjects reported a high level of use of both cognitive and affective strategies.

With regard to the overall use of strategies, no significant relationship was identified with pronunciation accuracy. Nevertheless, the use of memory, cognitive, and affective subcategories reported to have a significant relationship with pronunciation accuracy. As the statistical analysis revealed, both memory and compensation strategies were applied more frequently at lower accuracy levels; reversely, the affective strategies emerged to be more frequently used at higher levels of accuracy.

With respect to the use of each individual strategy, seven strategies appeared to have a significant relationship with pronunciation accuracy. Subsumed under the memory subcategory ; making songs and rhythms, and recalling teachers 'pronunciation were found to be more frequently used at lower levels of accuracy . Besides, avoiding the

pronunciation of difficult words and asking for pronunciation help, as compensation strategies, were also reported to be more frequently used at lower levels of accuracy.

The other strategies which emerged to be more frequently applied at higher accuracy levels include the two affective strategies of risk taking and self encouragement. Similarly, intensive listening, as a cognitive strategy, was also found to be used more frequently at higher accuracy levels.

Taken together, the evidence from this study points towards the idea that the overall use of pronunciation learning strategies has no relationship with pronunciation accuracy; yet, this relationship can be identified at the level of use of individual strategies. The findings of this study support the idea that the use of individual strategies can reveal many facts about foreign language pronunciation learning. Indeed, this research study provides further evidence about the role of the affect and the emotional side of the learner in foreign language pronunciation learning. In addition, the findings underline the role of exposure in learning foreign language pronunciation.

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APPENDICES

APPENDIX A

Berkil‘s (2008) Questionnaire

STRATEGY INVENTORY FOR LEARNING PRONUNCIATION

(SILP; THE ENGLISH VERSION)

(Based on Peterson, 1997)

Directions: This form of the Strategy Inventory for Pronunciation Learning has been designed for students learning English as a second or foreign language. **Please indicate by circling the numbers (1, 2, or 3) how often you use the strategies described and labeled in the following part.**

1. Rarely-Never

2. Sometimes

3. Frequently

Answer in terms of how well each statement describes you, NOT in terms of what you think you should do, or what other people do. **There are no right or wrong answers to the statements below**. Your responses will not affect your course grades, therefore try to be relaxed and answer honestly.

Depending on your language experience and needs, you may be using different types of strategies. Therefore, not everyone needs to use the same or similar kind of strategies . A low or high score and different numbers do not show that you are a bad or good learner.

Example

Read the strategy item, choose your frequency response and then circle the number.

Strategy Inventory for Learning Pronunciation (SILP)

1. Rarely-Never 2. Sometimes 3. Frequently

PART A (Memory) **R/N S F**

1. I use phonetic symbols or my own codes to remember how to pronounce words. 1 2 3
2. I make up songs or rhymes to remember how to pronounce words. 1 2 3
3. I associate the words that I do not know how to pronounce with the words that I do know how to pronounce. 1 2 3
4. I associate English pronunciations with Turkish pronunciations. (coke with kok- (smell)
5. I try to recall how my teachers have pronounced something. 1 2 3
6. I practice a difficult word over and over. 1 2 3

PART B (Cognitive)

7. I imitate native speakers' or my teachers' pronunciations. 1 2 3
8. I repeat aloud after a teacher or native speaker. 1 2 3
9. I repeat aloud after tapes, television, a movie or electronic dictionaries. 1 2 3
10. I repeat silently. 1 2 3
11. I talk aloud to myself. 1 2 3
12. I say things silently to myself. 1 2 3
13. I read out loud words, paragraphs or passages. 1 2 3
14. I do exercises/practice to acquire target language sounds. 1 2 3
15. I practice sounds first in isolation and then in context. 1 2 3
16. I capture pronunciation errors made by other Turkish speakers of English. 1 2 3
17. I notice mouth positions and watch lips. 1 2 3
18. I concentrate intensely on pronunciation while listening to the target language. 1 2 3
19. I form and use hypotheses about pronunciation rules. 1 2 3
20. I try to imitate my teacher's mouth movements. 1 2 3
21. I listen to tapes, television, movies or music. 1 2 3
22. I concentrate intensely on pronunciation while speaking. 1 2 3
23. I speak slowly to get the pronunciation right. 1 2 3
24. I record my own voice to hear my pronunciation. 1 2 3
25. I notice or try out different accents and dialects of English. 1 2 3
26. I practice saying words slowly at first and then faster. 1 2 3
27. I notice contrasts between Turkish and English pronunciation. 1 2 3
28. I mentally rehearse how to say something before speaking. 1 2 3

PART C (Compensation)

29. I avoid saying the word which I have difficulty in pronouncing. 1 2 3
30. I use mime or gesture for the words that I have difficulty in making their meanings clear with my pronunciation. 1 2 3
31. I use the synonyms of words that I have difficulty in pronouncing. 1 2 3
32. I use more words in the place of a single word that I have difficulty in pronouncing (circumlocution) 1 2 3

33. I check the phonetic symbols of the words from a dictionary for correct pronunciation when I have difficulty pronouncing. 1 2 3

34. I listen to the pronunciations of words from electronic dictionaries or so forth to correct my pronunciation. 1 2 3

35. I ask someone to pronounce the words that I have difficulty in pronouncing. 1 2 3

PART D (Metacognitive)

36. I try to learn something about phonetics. 1 2 3

37. I read reference materials about target language pronunciation rules. 1 2 3

38. I seek out models for sounds. 1 2 3

39. I purposefully focus my listening on particular sounds. 1 2 3

40. I purposefully focus my learning on particular sounds. 1 2 3

41. I try to memorize the sounds (or the alphabet) right away. 1 2 3

42. I choose to memorize, rather than read, a presentation. 1 2 3

43. While preparing for a presentation, I write words that are difficult for me to pronounce very large in my notes. 1 2 3

PART E (Affective)

44. I have a sense of humor about my mispronunciations. 1 2 3

45. I have fun with pronouncing target language words with native language pronunciation or vice versa. (saying Turkish la-te instead of / leɪt/) .1 2 3

46. I encourage myself by making positive statements, such as " My pronunciation is improving" . 1 2 3

47. I try to take risks in pronouncing words regardless of the possibility of making mistakes or looking foolish. 1 2 3

48. I try to pay more attention to my pronunciation if my pronunciation is appreciated by others. 1 2 3

PART F (Cooperation)

49. I ask someone else to correct my pronunciation. 1 2 3

50. I talk with people around me in English. 1 2 3

51. I study with someone else. 1 2 3

52. I tutor, teach, or help someone else to learn pronunciation. 1 2 3

APPENDIX B

Students' Pronunciation Learning Strategies Questionnaire

Dear student,

You are kindly requested to fill in this questionnaire which seeks to investigate the use of pronunciation learning strategies by first year EFL students. It is crucially important to answer in terms of how well each statement describes you, not in terms of what you think you should do. Your sincerity and assistance will be highly appreciated, and your answers will certainly be kept confidential .Thank you in advance for your collaboration.

A-Background information:

1-Gender: male ☐ female ☐

2- Age: …….

B-Pronunciation Learning Strategies

Read the statements stated below and circle the response which indicates how often you use each strategy for the purpose of learning English pronunciation according to the following scale:

1- Never or almost never **2-** Rarely **3-**Sometimes **4-** Often **5-** Always or almost always

Part A (Memory)	**N R S O A**
1. I use phonetic symbols or my own codes to remember how to pronounce words.	1 2 3 4 5
2. I make songs or rhythms to remember how to pronounce words.	1 2 3 4 5
3. I memorize the pronunciation of new words when I associate them with a situation in which I heard them.	1 2 3 4 5
4. I try to recall (remember) how my teacher pronounced a given word.	1 2 3 4 5
5. I practise a difficult word over and over.	1 2 3 4 5
Part B (Cognitive)	**N R S O A**
6. I imitate my teachers' or native speakers' pronunciation.	1 2 3 4 5

7. I listen intensely to tapes, music, and watch movies in English.	1 2 3 4 5
8. I read out loud words, paragraphs, or passages.	1 2 3 4 5
9. I do exercises /practise sounds at first in isolation and then in context (e.g., in a sentence, story, or a poem).	1 2 3 4 5
10. I concentrate intensely on pronunciation while speaking or while listening to the English language.	1 2 3 4 5
11. I practise how to say a given word in mind before speaking.	1 2 3 4 5
12. I practise saying words slowly at first and then faster.	1 2 3 4 5
13. I pay attention to errors made by others (e.g., students, or teachers).	1 2 3 4 5
Part C (Compensation)	**N R S O A**
14. I avoid saying words which I have difficulty in pronouncing.	1 2 3 4 5
15. If I do not know how to pronounce a given word, I guess its pronunciation.	1 2 3 4 5
16. I use synonyms of words that I have difficulty in pronouncing.	1 2 3 4 5
17. I check the phonetic symbols of the words from a dictionary for correct pronunciation.	1 2 3 4 5
18. I ask someone to pronounce the words that I have difficulty in pronouncing.	1 2 3 4 5
Part D (Metacognitive)	**N R S O A**
19. I evaluate my progress in pronunciation by recording myself and comparing my pronunciation to the pronunciation of native speakers.	1 2 3 4 5
20. I notice my pronunciation problems and try to overcome them.	1 2 3 4 5
21. While preparing for a presentation or a talk in English, I look up the pronunciation of new words in a dictionary and practise their pronunciation.	1 2 3 4 5
22. I purposefully focus my listening on particular sounds.	1 2 3 4 5
23. I plan pronunciation learning i.e. I set the time of learning, and I try to find as many ways of practicing pronunciation as I can.	1 2 3 4 5
Part E (Affective)	**N R S O A**
24. I have a sense of humor about my mispronunciations.	1 2 3 4 5
25. I encourage myself to speak English even when I am afraid that my	

pronunciation is not good.	1 2 3 4 5
26. I try to make risks in pronouncing words regardless of the possibility of making mistakes or looking foolish.	1 2 3 4 5
Part F (cooperation)	**N R S O A**
27. I ask someone else to correct my pronunciation.	1 2 3 4 5
28. I learn pronunciation with other students or friends.	1 2 3 4 5
29. I tutor, teach or help someone else learn pronunciation.	1 2 3 4 5

Thank you so much for your help!

APPENDIX C

PRONUNCIATION ELICITATION TASK

Text 1:

The North Wind and the Sun

The North Wind and the Sun were disputing which was the stronger, when a traveler came along wrapped in a warm cloak. They agreed that the one who first succeeded in making the traveler take his cloak off should be considered stronger than the other. Then the North Wind blew as hard as he could, but the more he blew the more closely did the traveler fold his cloak around him; and at last the North Wind gave up the attempt .Then the Sun shone out warmly, and immediately the traveler took off his cloak .And so the North Wind was obliged to confess that the Sun was stronger of the two.

Handbook of the IPA (1999: 39)

Text 2:

The Boy who Cried Wolf

There was once a poor shepherd boy who used to watch his flocks in the fields next to a dark forest near the foot of a mountain. One hot afternoon, he thought up a good plan to get some company for himself and also have a little fun. Raising his fist in the air, he ran down to the village shouting 'Wolf, Wolf.' As soon as they heard him, the villagers all rushed from their homes, full of concern for his safety, and two of his cousins even stayed with him for a short while. This gave the boy so much pleasure that a few days later he tried exactly the same trick again, and once more he was successful. However, not long after, a wolf that had just escaped from the zoo was looking for a change from its usual diet of chicken and duck. So, overcoming its fear of being shot, it actually did come out from the forest and began to threaten the sheep. Racing down to the village, the boy of course cried out even louder than before. Unfortunately, as all the villagers were convinced that he was trying to fool them a third time, they told him, 'Go away and don't bother us again.' And so the wolf had a feast.

(Deterding, 2006 , p. 193)

APPENDIX D

The Phonemic Transcription of the Texts

Text 1: The North Wind and the Sun (IPA, 1999, p. 44)

ðə ˈnɔɹθ ˌwɪnd ən ə ˈsʌn wɚ dɪsˈpjuɹɪŋ ˈwɪtʃˈwəz ðə ˈstɹɑːŋgɚ, wɛn ə ˈtɹævlɚ ˌkeɪm əˈlɑːŋ ˈɹæpt ɪn ə ˈwɔɹm ˈkloʊk. ðeɪ əˈgɹiːd ðət ðə ˈwʌn hu ˈfɚst səkˈsiːdəd ɪn ˈmeɪkɪŋ ðə ˈtɹævlɚ ˈteɪk ɪz ˈkloʊk ˌɑf ʃʊd bi kənˈsɪdɚd ˈstɹɑːŋgɚ ðən ðɪ ˈʌðɚ. ðɛn ðə ˈnɔɹθ ˌwɪnd ˈbluː əz ˈhɑɹd əz hi ˈkʊd, bət ðə ˈmɔɹ hi ˈbluː ðə ˈmɔɹ ˈkloʊsli dɪd ðə ˈtɹævlɚ ˈfoʊld hɪz ˈkloʊk əˈɹaʊnd ɪm; ˌæn ət ˈlæst ðə ˈnɔɹθ ˌwɪnd ˌgeɪv ˈʌp ði əˈtɛmpt. ˈðɛn ðə ˈsʌn ˈʃaɪnd ˌaʊt ˈwɔɪmli ənd ɪˈmiːdiətli ðə ˈtɹævlɚ ˈtʊk ˌɑf ɪz kloʊk. ən ˈso ðə ˈnɔɹθ ˌwɪnd wəz əˈblaɪdʒ tɪ kənˈfɛs ðət ðə ˈsʌn wəz ðə ˈstɹɑŋgɚ əv ðə ˈtu

Text 2: The Boy who Cried Wolf

ðə ˈbɔɪ | hu ˈkraɪd ˌwʊlf

1. ðeə wz ˈwʌns | ə ˈpɔ `ʃepəd ˌbɔɪ | hu ˈwɒʧd ɪz ˌflɒks |
2. ɪn ðə ˈfildz | neks tu ə `dɑk `ˌfɒrɪst | nɪə ðə ˈfʊt əv ə ˌmaʊntɪn.
3. ˈwʌn ˈhɒt | ɑftə`ˌnun, | hi ˈθɔt ˈʌp | ə ˈgʊd ˌplæn |
4. tə get sm `kʌmpəni fr ɪmˌself | ən ˈɔːlsəʊ ˈhæv ə lɪtl ˌfʌn.
5. `reɪzɪŋ ɪz `fɪst ɪn ði `ˌeə, | hi ˈræn ˈdaʊn | tə ðə `ˌvɪlɪʤ |
6. ʃaʊtɪŋ `wʊlf, `wʊlf ! ə `sun əz ðeɪ `hɜd ˌɪm | ðə ˈvɪlɪʤəz
7. ˈɔl ˈrʌʃt frm ðeə `ˌhəʊmz | `fʊl əv knˈ`ˌsɜn | fər ɪz `ˌseɪfti,
8. ən `tu əv ˌðm | ˈsteɪd `wɪð ɪm fər ə waɪl. ðɪs `geɪv ðə ˌbɔɪ
9. `səʊ mʌʧ`ˌpleʒə | ðət ə `fju deɪz `ˌleɪtə | hi traɪd ɪg`zækli
10. ðə seɪm ˌtrɪk| ə`gen, ən ˈwʌns ˌmɔː | hi wz sək`sesfl.
11. haʊ`evə, ˈnɒt ˈlɒŋ ˌɑftə | ə ˈwʊlf | wəz ˈlʊkɪŋ fər ə `ʧeɪnʤ
12. ɪn ɪts juʒl ˌdaɪət | əv ʧɪkɪn ən ˌdʌk | səʊ ɪt ˈæktʃli
13.`dɪd kʌm `aʊt | frm ðə `fɒrɪst | n bɪgæn tə `θretn ðə ˌʃip.
14. ˈreɪsɪŋ ˈdaʊn tə ðə ˌvɪlɪʤ, | ðə `ˌbɔɪ | əv ˌkɔs| ˈkraɪd `aʊt
15.`ivn `ˌlaʊdə | ðən bɪ`fɔ, bət `æz `ɔl ðə `ˌvɪlɪʤəz |
16. wə kn`vɪnst ðət i wz `traɪɪŋ, tə `ful ðm ə `θɜd `ˌtaɪm,|
17.`nəʊbɒdi `ˌbɒðəd | tə ˈkʌm ən `help ɪm. ən ˈsəʊ | ðə `ˌwʊlf | hæd ə `fist

Transcription taken from
PhonetiBlog - Jack Windsor Lewis phonetic blog
http://www.yek.me.uk/archive38.html#blog371

APPENDIX E

THE STATISTICAL ANALYSIS IN SPSS

1. Descriptive statistics for the use of each individual strategy

	N	Moyenne	Ecart-type	Erreur standard moyenne
A1	28	2,2857	1,18187	,22335
A2	28	2,6786	1,46701	,27724
A3	28	3,9286	,85758	,16207
A4	28	3,3214	1,54089	,29120
A5	28	3,7143	1,15011	,21735
B1	28	3,6429	1,22366	,23125
B2	28	4,2143	1,03126	,19489
B3	28	3,3214	1,41562	,26753
B4	28	2,8571	1,17739	,22251
B5	28	3,9286	1,01575	,19196
B6	28	3,9286	1,18411	,22378
B7	28	3,6429	1,31133	,24782
B8	28	3,8571	1,14550	,21648
C1	28	2,8929	1,47421	,27860
C2	28	3,4643	1,17006	,22112
C3	28	3,8214	1,12393	,21240
C4	28	2,8929	1,59488	,30140
C5	28	3,0000	1,36083	,25717
D1	28	2,6786	1,49204	,28197
D2	28	3,8571	1,07890	,20389
D3	28	3,8214	1,21879	,23033
D4	28	3,1071	1,06595	,20145
D5	28	2,8929	1,42307	,26894
E1	28	3,4286	1,39917	,26442
E2	28	4,1429	1,14550	,21648
E3	28	3,3214	1,02030	,19282
F1	28	2,7500	1,14261	,21593
F2	28	3,2500	1,43049	,27034
F3	28	3,1429	1,32537	,25047

A: Memory strategies; B: Cognitive strategies; C: Compensation; D: metacognitive

E: Affective.

2. Descriptive Statistics for the use of each subcategory

	N	Moyenne	Ecart-type	Erreur standard moyenne
ta	28	3,1857	,51619	,09755
tb	28	3,6741	,62207	,11756
tc	28	3,2143	,79987	,15116
te	28	3,6310	,93553	,17680
tf	28	3,0476	,86407	,16329

3. Descriptive statistics for the overall use of strategies

	N	Moyenne	Ecart-type	Erreur standard moyenne
tt	28	3,3719	,46844	,08853

Internal consistency measure

Statistiques de fiabilité

Alpha de Cronbach	Nombre d'éléments
,777	29

Correlation

Corrélations

		ta	tb	tc	te	tf	tt	G
ta	Corrélation de Pearson	1	,337	,514**	,009	,372	,600**	,438*
	Sig. (bilatérale)		,080	,005	,963	,051	,001	,020
	N	28	28	28	28	28	28	28
tb	Corrélation de Pearson	,337	1	,280	,613**	,285	,842**	-,178
	Sig. (bilatérale)	,080		,150	,001	,141	,000	,364
	N	28	28	28	28	28	28	28
tc	Corrélation de Pearson	,514**	,280	1	-,151	,456*	,590**	,384*
	Sig. (bilatérale)	,005	,150		,443	,015	,001	,044
	N	28	28	28	28	28	28	28
te	Corrélation de Pearson	,009	,613**	-,151	1	,211	,476*	-,495**
	Sig. (bilatérale)	,963	,001	,443		,281	,010	,007
	N	28	28	28	28	28	28	28
tf	Corrélation de Pearson	,372	,285	,456*	,211	1	,587**	,197
	Sig. (bilatérale)	,051	,141	,015	,281		,001	,314
	N	28	28	28	28	28	28	28
tt	Corrélation de Pearson	,600**	,842**	,590**	,476*	,587**	1	,139
	Sig. (bilatérale)	,001	,000	,001	,010	,001		,481
	N	28	28	28	28	28	28	28
G	Corrélation de Pearson	,438*	-,178	,384*	-,495**	,197	,139	1
	Sig. (bilatérale)	,020	,364	,044	,007	,314	,481	
	N	28	28	28	28	28	28	28

**. La corrélation est significative au niveau 0.01 (bilatéral).

*. La corrélation est significative au niveau 0.05 (bilatéral).

Résumé

La recherche sur les stratégies d'apprentissage des langues a donné des résultats concluants sur le rôle de son utilisation pour réussir dans l'acquisition d'une langue seconde. Cependant, on sait peu de choses sur le rôle de son utilisation par rapport à la capacité de prononciation en général et à la précision de la prononciation en particulier. Sur la base de cette considération, cette étude vise à explorer l'utilisation des stratégies d'apprentissage de la prononciation et sa relation avec sa précision au niveau segmentaire. Pour atteindre cet objectif, un questionnaire sur la stratégie d'apprentissage de la prononciation et une tâche d'élicitation de la prononciation ont été mis en œuvre avec des apprenants de première année de l'EFL à l'Université Mohammed Seddik Ben Yahia. Les résultats de cette étude montrent que les apprenants en EFL de première année emploient les stratégies d'apprentissage de la prononciation à un niveau d'utilisation moyen, avec une préférence pour l'utilisation de stratégies affectives et cognitives. En outre, les résultats montrent que si les stratégies de mémoire et de compensation sont plus fréquemment utilisées par les élèves ayant un niveau de précision plus faible, les stratégies affectives sont plus fréquemment appliquées par des élèves plus précis. Cependant, aucune relation n'a été trouvée entre l'utilisation globale des stratégies d'apprentissage de la prononciation et la précision de la prononciation. Il peut donc être suggéré que le côté affectif de l'apprentissage joue un rôle vital dans la réussite de la prononciation.

ملخص

قدمت الدراسات حول استراتيجيات تعلم اللغة نتائج داعمة لدور استخدام هذه الأخيرة في تحقيق النجاح في اكتساب اللغة الثانية .ورغم ذلك ، لا يعرف سوى القليل عن دور استخدام الاستراتيجيات فيما يتعلق بالقدرة على النطق بشكل عام ودقة النطق على وجه الخصوص .استناداً إلى هذا الاعتبار ، تهدف هذه الدراسة إلى تقصي استخدام استراتيجيات تعلم النطق وعلاقتها بدقة النطق على المستوى الصوتي . ولتحقيق هذا الهدف ، تم إجراء استبيان حول استراتيجيات تعلم النطق إلى جانب اختبار استظهار النطق على طلاب السنة الأولى لغة انجليزية بجامعة محمد صديق بن يحيى .وأظهرت نتائج هذه الدراسة أن متعلمي السنة أولى لغة انجليزية يستخدمون استراتيجيات تعلم النطق على مستوى متوسط من الاستخدام ، مع تفضيلهم لاستخدام الاستراتيجيات العاطفية والإدراكية .إلى جانب ذلك ، تظهر النتائج أنه في حين يتزايد استخدام استراتيجيات الذاكرة والتعويض من قبل الطلاب الذين يتمتعون بمستويات أقل من الدقة ، فإن الاستراتيجيات العاطفية يتم تطبيقها بشكل متكرر أكثر من قبل الطلاب ذوي الدقة العالية .ومع ذلك ، لم يتم العثور على أي علاقة بين الاستخدام الكلي لاستراتيجيات تعلم النطق ودقة النطق .يمكن القول ، إذن ، أن الجانب العاطفي من التعلم له دور حيوي في تحقيق النطق الناجح.