Teaching English phonemes to Moore EFL students using phonemic awareness activities: A contrastive analysis approach

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Abstract

Contrastive analysis (CA) has been extensively used in the field of second language acquisition (SLA) with the aim of comparing languages to identify their similarities and differences followed by a focus on differences. This predictive approach has, yet, been proven to be irrelevant in SLA (Wardhaugh, 1970; Oller & Ziahousse, 1970). The current study uses explicit instruction (EI) based on CA of the phonemes of Moorer and English with no prediction of learning difficulty. The EI is followed by phonemic awareness (PA) activities for an efficient and effective acquisition of the phonemes of English. Framed according to Lee and VanPatten (2003), processing instruction model, this study hypothesized that EI only is not beneficial in foreign language learning (FLL) while supporting that EI followed by PA activities is relevant in FLL. The research findings support the study’s hypotheses since the EI+PA group outperformed the EI only group, which in turn outperformed the control group which received no treatment, though with no significant difference. The Kruskal-Wallis equality-of-populations rank test supports that there is statistically a significant difference between the three groups from the posttest results since the p-value, 0.0001, is p < .0.5. The EI+PA group scored higher with an average of 14.4 /20 points as well as the highest median, 14.5. Therefore, CA followed by PA activities is the starting point for acquisition.

Introduction

Phonological-based instruction, by extension phonemic awareness, and contrastive analysis have been extensively used in the field of second or foreign language acquisition. The former aims at helping second or foreign language learners better manipulate the phonemes of their second language (L2) or foreign language (FL). Phonemic awareness, a subfield of phonological awareness, refers to the ability to identify, manipulate, and represent speech sounds (Wagner and Torgesen, 1987; Cunningham, 1990; Adams, 1990; Dixon, Chuang, and Quiroz, 2012, and Huo and Wang 2017). It is believed to be relevant in second or foreign language acquisition since it enhances learners reading comprehension and pronunciation skills (Adams (1990), Cunningham (1990), Szabo (2010), Jensen (2011), and Fielding-Barnsley, (1997). The latter, contrastive analysis, a sub-discipline of contrastive linguistics, consists in comparing two or more languages to determine among similarities and differences the linguistic features of the languages being compared with the aim of providing learners with input. Gast (2012), in the same vein stresses that contrastive analysis, in its narrow definition, investigates the differences and similarities between pairs of language with the aim of providing input to the applied disciplines, including foreign language teaching and translation studies. The aim of the current study is to provide input to the foreign language teaching discipline. With this in mind, contrastive analysis and phonemic awareness are used in our research. By stating so, CA is used to compare the phonemes of Moore as first language (L1), and English as foreign language (FL) to allow Moore first language speakers to better notice the differences and similarities among the phonemes of the three languages for a better learning and pronunciation of their target language’s phonemes (English). Following
the contrastive analysis of the two languages in question, structured phonemic awareness activities based on Lee and VanPatten (2003) processing instruction (PI) model are used to push learners to better attend to the phonemes of their L2.

However, contrastive analysis is used in the current study with a different approach since the traditional approach of contrastive analysis with respect to its underlying three versions (the strong, the weak, and the moderate versions) have been proven irrelevant in second or foreign language teaching (Wardhaugh, 1970), (Oller & Ziahosseiny, 1970), and (Whitman and Jackson, 1972). Also, contrastive analysis is referred to in this study as explicit information (also referred to as explicit instruction) that we will elaborate later.

The current study involves the phonemes of three languages, Moore as first language, French as intermediate language, and English as foreign language. The research took place in Burkina Faso, Ouagadougou, namely University Joseph Ki-ZERBO, where Moore is one of the first languages, French the official language, and English a foreign language.

Moore, a language spoken primarily in Burkina Faso—a landlocked country in western Africa, was formerly called Upper Volta and changed to the current name, Burkina Faso, after the independence of the country in the 1960’s. Mooré is part of the Gur languages based on the classification of voltaic languages from 1863 by Greenberg (Cited in Kinda, 1983, p. 1). The voltaic languages are said to be a Niger-Congo branch, which in turn belongs to the big family of Congo-cordofanienne languages (Kinda, 1983). There are varieties of Mooré spoken throughout the country. Yet, the current study will focus on the phonemes of Mooré spoken in the central region of Ouagadougou.

The history of the English language has been the focus of many studies and research. Hence, studies have demonstrated that many factors and events, including wars, invasion, and conquests, shaped the history of the English language starting from the Old English to Modern English. With regard to all of these invasions, the English language underwent many changes from synthetic to analytic. English belongs to the Low West Germanic Branch that, in turn, belongs to a higher branch, which belongs to the Indo European (IE) Family. The current study will focus on the Modern English’s phonemes.

French is the official language of the country. By official language, it is meant the language used in public, professional, and academic settings, newspapers, and conferences. Yet, the question of the origin of the French language finds an answer through the reconstruction method that classifies French with the Romance languages. The Romance languages are a group of closely related vernaculars descended from Latin language, a member of the Italic branch of Indo-European Languages. In this respect, the French language occurred in three phases, including Old French (c. 1100-1300), Middle French (c. 1300-1500), and Modern French (c.1500-present). With regards to the variation of the language since old French, it is clear that the sound systems of the language have varied from one era to another Hence, the current study focuses on the phonemes and phonological rules of Modern French with regards the standard system.

Many reasons explain the choice of the current study. First, students, at the university Joseph Ki-ZERBO, and precisely at the Department of Anglophone Studies, have difficulties, identifying, representing and producing English phonemes correctly. This may be due to the interference between their L1 and FL or some other factors, social, psychological, and economic. In addition, most students do not know the difference between a phoneme and an alphabet letter. Also, the phonemes encountered in the FL have been replaced by wrong ones. This is where phonics fit in. Although the current study focuses basically on phonemic awareness, it also tackles the principle of phonics being defined as “a system of teaching reading that builds on the alphabetic principle, a system of which a central component is the teaching of correspondences between letters or groups of letters and their pronunciations” (Adams, 1990, p. 50).

Following the study rational, the current study’s questions are formulated according the PICO criteria, where P stands for population of interest, I for intervention, C for comparison, and O for outcome. In other words, the current study involves a population of interest which is the freshmen of the Department of Anglophone Studies who speak Mooré as First language, French as intermediate language, and English as foreign language. The current study seeks to depict the outcome of the intervention that is applied to the treatment groups to be compared with the control group to access the outcome. Hence, the research questions are structured as follows:

1. Why is explicit information only (based on contrastive analysis) believed not to be beneficial in foreign language teaching (FLT)?
2. How can structured phonemic awareness activities help learners to better acquire their foreign language (FL) phonemes-English?
3. How could the combination of explicit instruction (EI) (based on contrastive analysis) and phonemic awareness instruction be relevant and beneficial in FLT?

These research questions gave rise to the following research hypotheses:

1. Explicit information only is not beneficial in foreign language learning (FLL).
2. Phonemic awareness activities can help learners to better acquire their foreign language (FL) phonemes.
3. The combination of EI based on contrastive analysis followed by phonemic awareness activities paves the way to an effective acquisition in FLL.

**Literature Review**

**Contrastive analysis**

The study and comparison of languages have been an area of investigation for centuries. Contrastive Analysis was used by researchers as an effective tool to identify similarities and divergences among languages with the aim of addressing those divergences for an
effective learning in a second or foreign language acquisition setting. The comparative study of languages involves two levels: One language being the first language (L1) or mother tongue and the other, the second language (L2) or target language (TL).

Lado (1957) demonstrates the necessity for a systematic comparison of languages and cultures. He makes an assumption according to which “in the comparison between native and foreign language lies the key to ease or difficulty in foreign language learning” (p.1). Comparing languages became relevant in foreign language teaching settings. Hence, the author urges that language teachers not to simply teach foreign languages because it is not enough for learners to know that foreign language, but to compare the foreign language with the native language of the learners to better notice the learning difficulty in order to effectively address them during teaching.

In this respect, many researchers, such as, Sturm (1965), Dvos et al. (1993), Kambou (2001), Kadaruddin (2015), and NamazianDost (2017) have used the strong version of Contrastive Analysis Hypothesis (CAH) in the comparative study of human languages. This hypothesis is used to compare two or more languages, during which the similarities and differences in both languages are identified in order to allow L2 learners to effectively acquire their L2 with a focus on the differences, since differences have been believed to be the source of learning difficulty. For instance, Fries (1945, p.9) stated that “the most effective materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner”. This statement is further supported by Lado (1957, p. 2) as follows: “those elements that are similar to his [learner’s] native language will be simple for him, and those elements that are different will be difficult”. Hence contrastive analysis (CA) stood as a hypothesis developed to investigate or examine the differences and similarities between two languages the aim of which was to identify the areas of learners’ difficulties. This is further supported by Al-khresheh (2016) as he supports the relevance of CA in predicting learning difficulties.

Sturm (1965) considers the contrastive analysis of some phonological, morphological, and syntactical differences that exist in English and French whereas Devos et al. (1993) use contrastive analysis to resolve the object problems between English, French, and Dutch. Kambou (2001), in the same light, used contrastive analysis in a multilingual context to predict learning difficulties. This is the case of Moore-French speakers in learning English as Foreign language as well as Twi-English bilinguals who are learning French as foreign language. Kadaruddin (2015) compared the Mekongga syntax to English, a syntax being a part of grammar that study sentences’ structure. The Mekongga language is one of the local languages spoken in Indonesia. NamazianDost (2017), in the same vein, discussed the differences and similarities in the phonology and syntax of Persian and English to find areas of possible difficulty for L2 learners of English in order to address them. The syntactic features involve Subject -verb disagreement, Noun-number disagreement, and misuse of determiners (p.169). The author stated all these three syntactic errors exist among Persians learners of English as non-native language because: “(a) the difference between the mother tongue and the target language, and (b) mother tongue interference (MTI) (p. 171). The purpose of this contrastive approach was to identify and overcome learning problems faced by the native speakers of Mekongga who are studying English in Wundulako sub-district Kolaka city of Indonesia.

However, the traditional approach of CA encounters some limits. The weak version is believed to be too weak and the strong version too strong to account for learners’ difficulties Oller and Ziahosseiny (1970). Lance (1969) has proven that one-third to two-thirds of his adult foreign students’ errors were not traceable to their first language. Whitman and Jackson (1972) demonstrated that CA is inadequate theoretically and practically since what was predicted to be difficult was not and vice versa. Hughes (1980) went on to point out the failure of CAH due to its inability to effectively predict learning difficulty. These many criticisms gave rise to new orientations of contrastive analysis.

New orientations of contrastive analysis

With regards to series of criticisms towards the traditional approach of CA, many language teachers used CA with new directions. Kuperberg and Olshaint (1996) show that contrastive analysis could be used for a “specific purpose which is compatible with recent developments in the field” (p.150). Here, the predictive and explanatory approaches of CA are disregarded. The authors provide learners with salient contrastive linguistic input believed to facilitate noticing since learners are likely to attend to meaning and some aspects of the linguistic form they are exposed to. Sharwood Smith (1987), Ellis (1995), and Robinson (1995). The premise of this research is that salient contrastive linguistic input via input enhancement may incite L2 language awareness or noticing and therefore, an effective acquisition of the grammatical features of the L2. Input enhancement helps raise L2 awareness of some features the language being learnt.

It is believed that if the input exposed to learners is comprehensible learners will necessarily attend to it. Krashen (1985, p. 2) called such input “Comprehensible input”. James (1996) also used contrastive analysis by extension, contrastive linguistic input as contributing to language awareness. Next, Diallo et al. (2009) used a different approach of contrastive analysis in language teaching that they refer to as “a contrastive description and a converging didactics” (p.3). The authors compared the sounds and letters of learners’ first language (Fulfule) and their official language (French) and then teach learners’ official language through the medium of their first language. The current study also uses contrastive analysis with a different approach

Implication of contrastive analysis in the current study

Like Kuperberg and Olshaint (1996), James (1996), Diallo et al. (2009), the current study also uses contrastive analysis with a new approach. This approach disregards the strong, weak, and moderate versions of
CAH since they have flaws. Yet, contrastive analysis is used as a contrastive linguistic input tool to compare the phonemes of Moore, French, and English. Although French is not the main focus of our study, we decided to include its phonemes in the contrastive approach because we know that our participants necessarily speak French, and therefore, French phonemes may have influenced learners’ native language’s phonemes (Moore), and their foreign language’s ones (English). CA is also referred to in this study as explicit information (EI) as it is expressed in hypothesis one that explicit information (EI) only based on contrastive analysis is not beneficial in foreign language learning. By using contrastive analysis as a contrastive linguistic input tool, we hope to draw learners’ attention to the salient linguistic input and comprehensible input exposed to them. Yet, the innovation in the current research is to question how salient linguistic input and comprehensible input are framed and exposed to students. Therefore, beyond the salient linguistic input and comprehensible input, we provide native speakers of Moore who are learning English as foreign language (FL) with structured phonemic awareness (PA) activities to reinforce the EI already exposed to them. These structured PA activities are framed according to Lee and VanPatten’s (2003) processing instruction (PI) model. Thus, our study does not focus on PI per se. We are just framing our phonemic awareness activities based on PI structured input activities model. What is phonemic awareness?

**Phonemic awareness**

Phonemic awareness is a subfield of phonological awareness although some are using both interchangeably. The former is concerned with sound manipulation at the phoneme level whereas the latter deals with speech sounds at the syllables and word level. Adams (1990) refers to phonemic awareness as the understanding of smallest units of sounds that make up the speech stream: phonemes whereas phonological awareness encompasses larger units of sounds including syllables, onsets, and rimes. In the current study, the term phonemic awareness will be used as we are specifically dealing with smaller units of speech: phonemes, their identification, pronunciation, and representation.

Phonemic awareness (PA) became prominent in the 1990’s as studies wanted to address and understand children’s early literacy development and reading ability (Adams, 1990; Cunningham, 1990; and Fielding-Barnsley, 1997). Thus, research on phonemic awareness was primarily carried on children to investigate its effectiveness and relation to children early reading comprehension and pronunciation skills.

Other studies have applied PA to foreign and second language learners as a way to push these learners to better attend to the phonemes of their L2 that could pave the way to effective reading comprehension and pronunciation (Szabo, 2010; Jensen, 2011; and Saito, 2013).

In addition, former studies based their PA activities on blending, segmentation, identification, and discrimination of (Adams, 1990), (Cunningham, 1990), Szabo (2010), (Jensen, 2011), and (Fielding-Barnsley, 1997). The current study focuses mainly on the identification and representation phonemes.

**Implication of phonemic awareness in the current study**

In this respect, the current study uses PA activities to better help second language learners of English effectively and efficiently acquire the phonemes of their L2, here English. Yet, our study slightly differs from Szabo (2010), Jensen (2011), and Saito (2013). The current study does not seek to assess L2 learners’ reading comprehension skills, or the aspect of accentedness. Our participants are adult learners with an age interval of 21 to 27. They are oriented at the Department of Anglophone Studies, and registered for their first semester courses. This simply means that our participants already have a basic knowledge in English to comprehend basic English texts.

However, they have difficulties identifying, representing, and producing English phonemes. They also confuse phonemes with alphabet letters. Hence, this study aims at using structured phonemic awareness activities that are believed to push learners to better acquire the phonemes of English. Like former studies, as above mentioned the current study based its PA activities on identification and representation of phonemes. Yet, the PA slightly differs from former studies since the current study framed its structured PA activities according to Lee and VanPatten (2003) processing instruction (PI) teaching model.

Processing instruction (PI), which is generally defined as the way learners process or manipulate the input exposed to them, has been viewed as an effective teaching method in second language acquisition. Processing instruction originated from the work of (VanPatten & Cadierno, 1993), which aimed at providing an appropriate teaching method in foreign language teaching Mountaki (2016) and Wong and Ito (2018). It is based on structured input activities believed to push learners to attend to the linguistic items exposed to them. Types of structured input activities include the following:

- Supplying Information
- Surveys
- Matching
- Binary Options (True/False, Logical/Illogical, Normal/Strange, etc.)
- Ordering/Ranking (Lee & VanPatten, 2003).

Saying so, the phonemic awareness activities of the current study are structured as follows:

- Reading to identify phonemes
- Listening to identify phonemes
- Filling in the blank with missing phonemes to convey meaning
- Matching
- Representing phonemes
- Transcribing phonemes

Therefore, it is important show what a phoneme is as well this study approach to phonemes.
The functional approach of phonemes

**Historical foundation**

The current study uses the functionalist approach of phonemes’ description. Functionalism traces back to the Prague School, a school of linguistic thought and analysis established in Prague in 1926 by Vilém Mathesius along with Nikolaj Sergejevič Trubetzkoy and Roman Jacobson. They put their focus on structural and functional phonology with phonology being defined as “a study, inter alia [among others], of the phonemes of a given language” (Bičan, 2005, p.7). Saying that, linguists of the Prague Linguistic Circle emphasized on the function of elements within a language, their patterns, and how they contrast with one another. This is supported by the Saussurean orthodoxy, which argues that the relationship holding among all elements of the linguistic system are not of precisely the same nature. For example, the consonant /t/, /d/, and /n/ are distinctive phonemes in most languages, since they function to distinguish meaning (tin versus din versus fin) (Joseph et al., 2001, p. 18-19).

Here, the focus is on the distinctive features of the sound systems. In other words, the linguists of the Prague School have developed a way to analyze the distinctive features of sounds by which, each distinctive sound in a language is seen as composed of a number of contrasting articulatory and acoustic features, and any two sounds of a language that are perceived as being distinct will have at least one feature contrast in their compositions (The Prague school, Encyclopaedia Britannica).

**Phonology**

Phonology as “Language Files” defines it is the study of the sound patterns of a given language. It is concerned with the organization and classification of sounds as well as how sound sounds interact with each other. Phonetics is the study of the production of speech sound, their physical properties and how they are perceived by the human ear. Whereas, phonology focuses more on the patterns, organization, classification, and interaction of sounds in given languages. Also, by convention, phonetics uses square brackets ([ ]) phonology uses slashes (/ /). Phonology is much more concerned with phonemes and allophones’ identification (minimal pairs minimal set, free variation, complementary distribution…) with the former being defined as the smallest distinctive unit of a speech sound (It is represented as follows: /p/, /d/, /t/, /v/) and the latter as the possible representation of the same phome. For instance, [p], [pʰ] are allophones of the same phoneme /p/. In addition, phonology deals with and explains why and how sounds occur in certain environment. It also provided phonological rules (assimilation, dissimilation, deletion, insertion, weakening…) to better explain how sounds may vary depending on the environment in which they occur.

Our study emphasizes only on phonemes, that is, the smallest distinctive units of the three languages, Mooré, French, and English. In addition, examples followed by their phonemic transcription are given to learners for them to better attend to the alphabet letters and their phonemic counterparts.

**Description of the phonemes of the current study**

The current study focuses mainly on the segmental features of the three languages: Mooré, French, and English. Therefore, the suprasegmentally features (which involve series of vowels and consonants with regards to tone, stress and intonation) are not tackled.

### Table 1: A complete representation of the vowels of the three languages, including monophthongs, diphthongs, and triphthongs as well as nasals

<table>
<thead>
<tr>
<th></th>
<th>Mooré vowels</th>
<th>French vowels</th>
<th>English vowels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral monophthongs</td>
<td>/i/, /ɪ/, /œ/, /ʌ/, /u/, /a/, /i/</td>
<td>/i/, /ɪ/, /œ/, /ʌ/, /u/, /a/, /i/</td>
<td>/i/, /ɪ/, /œ/, /ʌ/, /u/, /a/, /i/</td>
</tr>
<tr>
<td>Nasal monophthongs</td>
<td>/ẽ/, /ũ/, /ũi/, /ũo/</td>
<td>/i/, /i/, /œ/, /ʌ/, /u/, /a/, /i/</td>
<td>----------</td>
</tr>
<tr>
<td>Oral diphthongs</td>
<td>/œl/, /œl/, /œl/, /ũ/, /ũ/, /ũ/</td>
<td>See above</td>
<td>/œl/, /œl/, /œl/, /ũ/, /ũ/, /ũ/</td>
</tr>
<tr>
<td>Nasal diphthongs</td>
<td>/œl/, /œl/, /œl/, /ũ/, /ũ/, /ũ/</td>
<td>See above</td>
<td>----------</td>
</tr>
<tr>
<td>Triphthongs</td>
<td>----------</td>
<td>See above</td>
<td>----------</td>
</tr>
<tr>
<td>Divergent vowel sound</td>
<td>/i/, /ɪ/, /œ/, /ʌ/, /u/, /a/, /i/</td>
<td>/i/, /ɪ/, /œ/, /ʌ/, /u/, /a/, /i/</td>
<td>/i/, /ɪ/, /œ/, /ʌ/, /u/, /a/, /i/</td>
</tr>
<tr>
<td>Common vowel sound to all the three languages</td>
<td>/i/, /ɪ/, /œ/, /ʌ/, /u/, /a/, /i/</td>
<td>/i/, /ɪ/, /œ/, /ʌ/, /u/, /a/, /i/</td>
<td>/i/, /ɪ/, /œ/, /ʌ/, /u/, /a/, /i/</td>
</tr>
</tbody>
</table>
Methodology

Overview of the study design

The current study seeks to carry out an experiment for foreign language learning purposes, where Mooré, one of the local languages of Burkina Faso, is considered as first language (L1), French as intermediate language (L_int), and English as foreign language (FL). The experiment involves first-year students enrolled at the Department of Anglophone Studies who have already completed their first semester course work. The experiment consists in effectively teaching English phonemes to Mooré L1 speakers by using phonemic awareness activities.

A contrastive analysis (CA), referred to in this study as explicit instruction, is carried out to compare the phonemes, namely vowels and consonants, of the two languages, as above mentioned, with a focus on the segmental features, that is, single sound system (“Language Files”, 2007). The contrastive analysis is done to allow learners to see the differences and similarities between the phonemes of Mooré and English. Yet, the current study uses CA with a different approach since it does not predict learning difficulty based on the comparison of the languages in question or traces back learners’ errors from their L1. After simply comparing the phonemes of the three languages, phonemic awareness activities, which aimed at eliciting in learners an efficient learning of the phonemes of their target language, were designed. The phonemic awareness activities which are framed according to Lee and VanPatten’s (2003) structured input activities model, as stated above.

Population

This study involves first-year students of the Department of Anglophone studies who speak Mooré as first language (L1), French as intermediate language (L_int) and English as foreign language (FL) based on the 2018-2019 academic year. Out of the 86 students who volunteered 66 made of 13 females and 53 males met the requirements.

Sampling techniques

Sampling is the technique used to select the number of individuals for a study so that the individuals represent the larger group from which they were selected (Roberts, 2010). Common sampling techniques include probability sampling and non-probability sampling. The former is also called random sampling since it involves random selection whereas the latter does not (Lyons and Doueck, 2010). In addition, probability sampling is used when the researcher wants to specify the probability of a participant being part of the sample whereas the non-probability sampling technique does not give all individuals in the population an equal chance of being selected. Participants in non-probability sampling are selected on the basis of their accessibility or by a personal judgment of the researcher (also called purposive sampling, where participants are selected with a specific purpose in mind). The current study uses non-probability sampling, namely convenience sample because participants are selected on the basis of their availability. In other words, participants volunteered to participate in the study.

Procedures

As stated earlier, 66 participants made of 13 females and 53 met the requirements. Thus, three groups are formed, a control group and two treatment groups with 22 participants by group. All the three groups were administered the pretest. Following the pretest, the control group (called group B) received no intervention whereas the two treatment groups (group A and C) received different treatments. Group A benefited from explicit instruction only based on the contrastive analysis.
of the three languages. The explicit instruction is made of a contrastive analysis of the phonemes of Mooré and English supported by examples. Group C received explicit information and phonemic awareness activities. After the treatments, all three groups were administered a posttest, then, the pretest and posttest grades are collected, graded and analyzed using the Kruskal Wallis test.

The total credit hour for the lecture is 24 hours in addition to the 6 hours for the pretest and posttest, hence a total of 30 hours. After the first 12h, we completed the explanation of the handout. In the same way, it took 12h to complete the PA activities (SI) activities. This study has been completed in three-week time thanks to participants’ motivation.

Materials

The teaching material consists of two handouts which contain the explicit information (EI) package and the structured phonemic awareness (PA) activities. The explicit instruction is based on the contrastive analysis of the phonemes of Mooré as first language (L1), French as L2, and the phoneme of English as foreign language FL followed by their descriptive features and examples. The structured phonemic awareness activities are made of matching activities, filling in the blank, reading and listening to identify phonemes, matching, filling the blank, recording voices, producing phonemes, and dialogues. Below is a summary of the explicit information package.

Table 2: Examples of consonants in English, French, and Mooré

<table>
<thead>
<tr>
<th>Consonant</th>
<th>Mooré</th>
<th>French</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/p/</td>
<td>/poore/ (back)</td>
<td>/pɛɾ/ (father)</td>
<td>/put/ (put)</td>
</tr>
<tr>
<td>/b/</td>
<td>/biɡa/ (child)</td>
<td>/boŋ/ (good)</td>
<td>/bi/ (be)</td>
</tr>
<tr>
<td>/t/</td>
<td>/tuke/ (carry)</td>
<td>/tu/ (all)</td>
<td>/teɾbi/ (table)</td>
</tr>
<tr>
<td>/d/</td>
<td>/daare/ (day)</td>
<td>/dɔ/ (two)</td>
<td>/deɾ/ (day)</td>
</tr>
<tr>
<td>/n/</td>
<td>/noaagə/ (chicken)</td>
<td>/nu/ (we)</td>
<td>/noʊ/ (no)</td>
</tr>
<tr>
<td>/m/</td>
<td>/moane/ (do)</td>
<td>/mɛm/ (meme)</td>
<td>/mek/ (make)</td>
</tr>
<tr>
<td>/l/</td>
<td>/foom/ (you)</td>
<td>/foR/ (to do)</td>
<td>/fud/ (food)</td>
</tr>
<tr>
<td>/v/</td>
<td>/vim/ (life)</td>
<td>/vu/ (you)</td>
<td>/veri/ (very)</td>
</tr>
<tr>
<td>/k/</td>
<td>/ko/ (cultivate)</td>
<td>/ka/ (case)</td>
<td>/kip/ (keep)</td>
</tr>
<tr>
<td>/l/</td>
<td>/lebe/ (return sth)</td>
<td>/lesi/ (to let)</td>
<td>/ˈlɛv/ (love)</td>
</tr>
<tr>
<td>/w/</td>
<td>/woko/ (long)</td>
<td>/web/ (web)</td>
<td>/werd/ (word)</td>
</tr>
<tr>
<td>/g/</td>
<td>/gare/ (indigo)</td>
<td>/gaRʃi/ (boy)</td>
<td>/gou/ (go)</td>
</tr>
<tr>
<td>/j/</td>
<td>/jaaga/ (basket)</td>
<td>/trakav/ (work)</td>
<td>/jes/ (yes)</td>
</tr>
<tr>
<td>/z/</td>
<td>/zoodo/ (friendship)</td>
<td>/RɛSɛ/ (reason)</td>
<td>/ˈizi/ (easy)</td>
</tr>
<tr>
<td>/s/</td>
<td>/suuga/ (knife)</td>
<td></td>
<td>/si/ (see)</td>
</tr>
<tr>
<td>/h/</td>
<td>/hato/ (Sunday)</td>
<td></td>
<td>/hed/ (head)</td>
</tr>
<tr>
<td>/r/</td>
<td>/ʔɾhɔʔon/ (interjection)</td>
<td></td>
<td>/uʔɔv/ (interjection)</td>
</tr>
<tr>
<td>/ʃ/</td>
<td></td>
<td>/ʃa/ (cat)</td>
<td>/ʃeɾʃən/ (station)</td>
</tr>
<tr>
<td>/ʒ/</td>
<td></td>
<td>/ʒu/ (well)</td>
<td></td>
</tr>
<tr>
<td>/ɬ/</td>
<td></td>
<td>/ɡaʃe/ (to win)</td>
<td></td>
</tr>
<tr>
<td>/ʃ/</td>
<td></td>
<td></td>
<td>/dʒəmp/, (jump)</td>
</tr>
<tr>
<td>/ʃ/</td>
<td></td>
<td></td>
<td>/ʃəʃi/ (singing)</td>
</tr>
<tr>
<td>/ʒ/</td>
<td></td>
<td></td>
<td>/ʃət/ (thought)</td>
</tr>
<tr>
<td>/r/</td>
<td></td>
<td></td>
<td>/ɾtʃ/ (this)</td>
</tr>
<tr>
<td>/ɾ/</td>
<td>/roogo/ (house)</td>
<td></td>
<td>/rait/ (right)</td>
</tr>
</tbody>
</table>
Table 3: Examples of vowels in English, French, and Mooré

<table>
<thead>
<tr>
<th>Monophthongs</th>
<th>French</th>
<th>Moore</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>/æ/</td>
<td>/az/ (af)</td>
<td>/blaze/ (child)</td>
<td>/æ/ (eat)</td>
</tr>
<tr>
<td>/ɛ/</td>
<td>/pje/ (pie)</td>
<td>/bedre/ (big)</td>
<td>/ɛn/ (pen)</td>
</tr>
<tr>
<td>/ɒ/</td>
<td>/ka/ (ka)</td>
<td>/buga/ (child)</td>
<td></td>
</tr>
<tr>
<td>/uː/</td>
<td>/lak/ (lake)</td>
<td>/kan/ (give)</td>
<td>/saw/ (saw)</td>
</tr>
<tr>
<td>/ɪ/</td>
<td>/mɪnəm/ (minimum)</td>
<td>/kən/ (go)</td>
<td></td>
</tr>
<tr>
<td>/ɛ/</td>
<td>/pRɛsə/ (to preach)</td>
<td>/gəra/ (eggs)</td>
<td>/bed/ (bed)</td>
</tr>
<tr>
<td>/ɑː/</td>
<td></td>
<td>/rɪke/ (take)</td>
<td></td>
</tr>
<tr>
<td>/ɑː/</td>
<td>/byRɔ/ (office)</td>
<td>/boko/ (hole)</td>
<td></td>
</tr>
<tr>
<td>/ɜː/</td>
<td></td>
<td>/bʊri/ (bread)</td>
<td></td>
</tr>
<tr>
<td>/ɜː/</td>
<td>/ɪ/ (you)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ɑːʊ/</td>
<td>/Repɔ/ (rest)</td>
<td></td>
<td>/a bəv/ (above)</td>
</tr>
<tr>
<td>/ɑː/</td>
<td>/ba/ (law)</td>
<td></td>
<td>/stɑp/ (stop)</td>
</tr>
<tr>
<td>/ɔː/</td>
<td>/soʊR/ (sister)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/æː/</td>
<td></td>
<td></td>
<td>/fæt/ (fat)</td>
</tr>
<tr>
<td>/ɒ/</td>
<td></td>
<td></td>
<td>/lɔv/ (love)</td>
</tr>
<tr>
<td>/ɜː/</td>
<td></td>
<td></td>
<td>/gud/ (good)</td>
</tr>
<tr>
<td>/ɪ/</td>
<td></td>
<td></td>
<td>/bɤɪ/ (big)</td>
</tr>
<tr>
<td>/æ/</td>
<td>/ʒs/</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Following the explicit information package is the structured PA activities
The phonemic awareness activities include, reading to identify phonemes, matching, filling in the blanks, and producing phonemes as listed below:

Activity A- Reading to identify phonemes

In most educational systems, students spend many years studying grammatical rules, but they don’t get much of a chance to speak. Arriving in a new country can be a frustrating experience. Although they may be able to read and write very well, they often find that they can’t understand what people say to them. English is especially difficult because the pronunciation of words is not clearly shown by how they are written.

The passage is taken from: “Accurate English: A complete Course in Pronunciation” by (Dauer 1993, p. 6). In the passage, some sounds are underlined and put in bold to motivate students to pay attention to those sounds. After that, students will be asked to represent the phonemes of the underlined sounds followed by the production of each. Although we already provided participants with the handouts with the contrastive analysis of the phonemes of the three languages, they may not be able to state them all correctly, especially those that do not exist in their L1 (/ɒ/, /θ/, /ʃ/, /ʤ/).

Hence, we go back to the charts of the contrastive analysis of the phonemes of the three languages, to review the three features of consonant production and those of vowels. Students may be asked question about the text, such as what is the text about? do you agree or disagree? By doing so, students both attend to the meaning of passage as well as the sounds involved.

Activity B- Listening to identify phonemes

Here, the instructor dictates a passage in English where learners write the passage down. Following that, students are given a list of phonemes that they are asked to identify in the passage.

Activity C-Matching

a) Match the different phonemes below with the three languages and providing examples for each, where you underline the phoneme in each Example. The same phoneme may belong to the three languages.


Ex: the phoneme /ʃ/ belongs to both English and French English = show; French = chat

b) Matching the following phonemes below with the underlined letters.

1) Many students work hard to pass their exams even though some do not do so.
2) During the trial, the judge declared the convicted guilty.

/ŋ/, /l/, /dʒ/, /l/, /s/, /ʃ/, /l/, /θ/, /θl/, /ʃl/, /kl/, /hl/, /ŋ/
c) Here, student will be asked to match the missing phonemes from the list below to convey meaning. Some phonemes may not be used.

1), /k/—/t/, /2/) /t/--/gW--sT--/s/, /3) /lu--/4) /--/o'la/5) /fI--/d/ a) /k/; b) /z/; c) /u/; d) /æ/; e) /ʒ/; f) /dʒ/; g) /ŋ/; h) /ʊ/; /s/; /n/

Activity D: Transcription

transcribe the following words and expression phonemically
- phonemes, studies, teacher, work, students, at the library, women, education, this church, her mother, the jury, thinking, the child.
- Turn the following transcription into a text.

Here, a phonetic transcription of a text was given where phonemes are underlined, then, students were asked to provide the spelling of the phoneme as in a normal text

1) /lərnɪŋ tu spɪk oʊ 'fɔrən 'læŋɡwɔrdʒ 'fluəntli ænd wə 'θaut an 'ækzsənt tʃən ɪzə/ 2) /bæt ðə 'meɪdʒər 'prɔblem ɪz 'bɪtʃ 'ɪzɪbəl tu 'lɪtsən, ˈθɪɔk, ænd rɪ spənd ɪn ə 'nɛðər 'læŋɡwɔrdʒ æt ə 'nɛdəfərəl spɪd. ðə tsɪks tæm ænd ˈpræktɪs/.

Activity E-Listening to identify phonemes

a) Listen to the following words, expressions, or sentences in English and write them down.
- Fortunately- What is your favorite subject? -It was not easy to assert it. -Where is your term paper? -Floods. -I like green pepper. -I think the student will not fail. -An advertisement.

When my aunt visited me last summer, she promised to come back again next summer for she enjoyed staying with me and my sweet and kind friends.

b) Listen to the following passages in English and transcribe it.

Nice, a book, at the bookstore, the boy hit the ball, the rain made her wet, what is this? I love it, be careful, student, study.

Statistical treatments

Inferential statistics is used in this study since it makes prediction and tests the hypotheses about the data (Sheskin, 2004). In our research, inferential statistics are used to measure the validity of the research hypotheses in order to draw conclusions. To better assess the research hypotheses, non-parametric tests are used since the population is not normally distributed. Among the non-parametric tests, Kruskal Wallis test better fits this study. The Kruskal Wallis test fits the current study’s data analysis since the non-probability sampling techniques, namely, the convenience sample is used. The Kruskal Wallis test helps to measure the median values and performances of the three groups from pretest to posttest as well as the difference in the distribution of the scores (Hinkle et al., 2003). The null hypothesis for Kruskal Wallis test is that there is "no difference in the distribution of scores of the K populations", whereas the alternative hypothesis states that the K populations or the combination of populations differ with a level of significance set a priori at .05 (Hinkle et al. Op. cit., p.577).

Results

The three groups are named group A, group B, and group C where group A corresponds to EI group, group B to the CG group and group C to the EI+PA group. To assess for accuracy in grading, anonymous letters have been assigned to each student based on the group he or she belongs. For instance, participants of group A are named A1 to A22; group B, B1 to B22, and group C, C1 to C22. Following this process, the pretest is administered; the grades collected, graded, and reported. After the pretest, the CG left the study, while the EI only group and the EI + PA group continued with the experiment during which they received different treatments. The treatments are explicitly stated below. At the end of the treatments, the posttest was administered to the three groups. The pretest and the posttest are similarly framed as stated below:

Pretest and Posttest for a Research Study

I. Listening to identify phonemes

a. Write down the conversation as you hear it and underline just one of the following phonemes in the first sentence (instructor)

/dʒ/, /p/, /ə/, /ŋ/, /ʃ/, /m/, /k/, /i/, /j/, /dʒ/, /θ/, /ɛ/, /θ/, /f/, /j/

NB: Some phonemes may not be used

i. In the second sentence, underline 5 phonemes and then represent them.

ii. Do you agree or disagree with the second sentence statement? Justify.

b. Listen to the following words, expressions, or sentences in English to write them down, and then transcribe them afterwards. (instructor)

II. Reading to identify phonemes

a. Represent the underlined phonemes from the text.

Learning to speak and understand English as a foreign language is not easy at all. Arriving in a foreign country can be a frustrating experience for many reasons. First of all, learners may have difficulties speaking correctly with respect to the correct pronunciation of sounds in their native that do not exist in their target language. For instance, Native speakers of Moore learning English as their foreign or second language may have difficulties pronouncing words such as, thinking, pat, without, love, mother, judge, church, pleasure, and put because there are some sounds in these words that do not exist in their First language. Hence, to produce a sound in their
foreign that does not exist in their first language, learners are likely to erroneously transfer sounds of their first language into their foreign language. This will reside in negative transfer. Also, foreign language learners may have difficulties understanding what native speakers say to them because the pronunciation of words is not clearly shown by how they are written. Hence, the major problem is being able to listen, think, and respond in another language at a natural speed. This takes time and practice.

III. Matching

a. Match the following phonemes below with the underlined letters.

1) Many students work hard to pass their exams even though some do not do so.

2) During the trial, the judge declared the convicted guilty.

\( /n/, /t/, /d/, /l/, /e/, /i/, /s/, /f/, /k/, /n/, /l/, /dyl/, /z/, /sl/, /l/, /ol/, /a/, /\) 

NB: Some phonemes may not be used.

b. Match the different phonemes below with the three languages and providing examples for each, where you underline the phoneme in each Example. The same phoneme may belong to the two languages; then translate the examples from Moore into English.

Phonemes: \( /dyl/, /n/, /l/, /l/, /e/, /i/, /s/, /f/, /k/, /n/, /l/, /dyl/, /z/, /sl/, /l/, /ol/, /a/, /\)

Ex: the phoneme /l/ belongs to both English and Moore English =fud; Moore= foom (you)

IV. Filling in the blank with the missing phonemes to convey meaning

Fill in the blank with the missing phonemes from the list below to convey meaning. Some phonemes may not be used.

/\fr---, str---, t\nj/; 2) /t\gz\zem---/; 3)/ h---, l\p/, 4) /l---, k---/, 5) / b\nas---, z/, 6) /brt---, œz/.

7) /----, o/; 8) /l---, t/, 9) /n/; 10) /ne---/n/

List of phonemes:

\( /e/, /k/, /l/, /z/, /e/, /l/, /a/, / œ/, /x/, /ð/, /n/, /ù/, /\)

NB: Some phonemes may not be used.

V. Turn the following transcription into a text.


Transcribe the following words and expressions phonemically:

1) I am thinking
2) teaching
3) the child
4) at church
5) she works hard
6) a student
7) work

VI. What do you think about illiteracy? After discussing the topic in three sentences, underline and represent 10 phonemes from your discussion.

As stated in the methodology, the Kruskal Wallis test is used as statistical treatment in the current study. The current research aims at verifying the benefit of the combination of Explicit instruction + phonemic awareness activities over explicit instruction only in foreign language teaching and learning. In other words, we seek to find out if phonemic awareness activities model could show improvement in students’ performance. Hence, after the posttest, we conducted a Kruskal Wallis test to compare the median values of the three groups as well as the difference in the distribution of the scores.

To begin with, the current study assesses the level of students of the different groups after the pretest to make sure that there is no significant difference among them. This is represented in the table below.

Table 4: Main Statistics for the pretest scores

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Count</th>
<th>Mean</th>
<th>Sd</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>pretest</td>
<td>pretest</td>
<td>pretest</td>
<td>Pretest</td>
</tr>
<tr>
<td>Group A</td>
<td>22.0</td>
<td>7.5</td>
<td>3.2</td>
<td>8.0</td>
</tr>
<tr>
<td>Group B</td>
<td>22.0</td>
<td>6.9</td>
<td>3.2</td>
<td>6.5</td>
</tr>
<tr>
<td>Group C</td>
<td>22.0</td>
<td>8.1</td>
<td>3.2</td>
<td>8.5</td>
</tr>
<tr>
<td>Total</td>
<td>66.0</td>
<td>7.5</td>
<td>3.2</td>
<td>8.0</td>
</tr>
</tbody>
</table>

chi-squared = 1.933 with 2 d.f.
probability = 0.3804

chi-squared with ties = 1.954 with 2 d.f.
probability = 0.3765

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It is clear, as represented above, that the difference between the three groups was not statistically significant even though group C has an average level (8.1) higher than group A (7.5), which in turn is higher than Group B (6.9). The Kruskal Wallis test conducted on the posttest scores showed a p-value of .3765 which is higher than .05. This allows us to accept the null hypothesis that confirms the equality of the three groups right after the pretest, and before the actual treatment. While considering N the number of students, and using stata program for the statistical analysis, we obtained the following result: 

\[ \text{chi-squared} = 23.900 \text{ with 2 d.f.} \]
\[ \text{probability} = 0.0001 \]

The results of the test are supported by the analysis of the main statistics of student’s grades after the experiment as elaborated below. Group C which received explicit instruction followed by phonemic awareness activities scored higher with an average of 14.4/20 points. In addition, the distribution of the scores between the participants of this group is lower, which results in a low standard deviation: 2.5. Furthermore, group C has the highest median, 14.5, which indicates that half the students of this group obtained a grade higher or equal 14.5.

Group A which received explicit instruction (EI) only had a mean score of 9.4/20 which higher than the mean score of group B that in fact was the control group and therefore, did not receive any treatment. Yet, the distribution of scores of the EI group is slightly lower than that of the control group. Although, the distribution of scores of the EI group is slightly lower than that of the control group they both had the same median, 10. With the median being the grade that subdivided the ranked population into two sub-groups that is half of students of the two groups had a grade higher than 10 as opposed to the other half that had a grade lower than 10.

**Discussion**

To discuss the findings of the current study vis-à-vis the research questions it is important to recall them. The research questions of the current study include the following:

1. Why is explicit information only believed not to be beneficial in foreign language teaching (FLT)?
2. How can structured phonemic awareness activities help learners to better acquire their foreign language (FL) phonemes-English?
3. How could the combination of explicit instruction (EI) (based on contrastive analysis) and phonemic awareness instruction be relevant and beneficial in FLT?

To answer the first question, our research findings prove that the group that received EI only did not do well as compared to the group that benefited from both EI and PA activities. Previous studies, in the same vein, prove that explicit information (EI) is not beneficial in SLA, VanPatten and Cadierno (1993), VanPatten and Oikkenon (1996), DelliCarpini (2002) Sanz and Morgan-Short (2004), and Kissling (2013).

For instance, VanPatten and Oikkenon (1996) investigate the effects of explicit instruction (EI) and processing instruction (PI) in SLA. The results of their study prove that the PI group outperformed the EI group leading them to conclude that EI is not beneficial in SLA. For Kissling (2013), explicit phonemic awareness (PA) is not beneficial in SLA since over a century explicit information or explanation is believed to be unnecessary in SLA. His research findings support that explicit lessons did not facilitate the improvement in pronunciation; it is rather the input, practice and or feedback included in the pronunciation instruction. DelliCarpini (2002) goes on to stress that phonemic awareness can occur without an explicit instruction. For instance, his study reveals that over a course of a year, these adult-learners with “little formal education in ESL [English as second language]” did well in PA even though they have not received explicit PA instruction.

In a similar vein, the current study which consist in assessing the effectiveness of EI only and EI +PA activities in foreign language learning prove that EI only is not beneficial in SLA since the EI + PA group outperformed the EI only group. For instance, the statistical analysis of the current study via Kruskal Wallis
The results of the test are supported by the analysis of the main statistics of student’s grades after the experiment. Group C which received explicit instruction followed by phonemic awareness activities scored higher with an average of 14.4 /20 points. In addition, the distribution of the scores between the participants of this group is lower, which resulted in a low standard deviation: 2.5. Furthermore, group C has the highest median, 14.5, which indicates that half the students of this group obtained a grade higher or equal 14.5. Group A which received explicit instruction (EI) only had a mean score of 9.4/20 which higher than the mean score of group B (8.8) that in fact was the control group and therefore, did not receive any treatment. Yet, the distribution of scores of the EI group is slightly lower than that of the control group though both groups had the same median.

The why EI is proven to be irrelevant in SLA seems to reside on the way EI is given to students. Some studies have proven that mere explanation is not enough for acquisition to occur. For acquisition to happen learners need to be introduced comprehensible input based on salient linguistic features that can incite noticing (Kupferberg and Olshtain, 1996). By stating so, this approach consists in providing learners with salient contrastive linguistic input (CLI) that is believed to facilitate noticing since learners are likely to attend to meaning and some aspects of the linguistic forms they are exposed to, Selinker (1992), Smith (1987), Ellis (1995), and Robinson (1995). Other studies suggested that processing instruction rather than EI is beneficial since it aims at pushing learners to attend to meaning by deriving meaning from form (VanPatten and Oikkenon (1996), (Lee and VanPatten, 2003), for advocates of the communicative approach, second languages can be acquired with no kind of formal or explicit instruction. For them, via exposure and comprehensible input of a given language to the learner, acquisition would occur outside any formal instruction acquisition (Rahimpour and Salimi, 2010).

Although the current study and previous studies as above mentioned with respect to students’ grades demonstrated that EI is not beneficial in SLA, other studies have proven otherwise. In other words, some studies such as, Fernandez (2008), Farley (2003), Ellis (2004), Lord (2005), and Ling (2015) have proven that EI is not negligible in SLA. Ellis (2004) argues that, “explicit knowledge is knowledge about language and about the uses to which language can be put” (229). Instructors, be it L1 or L2 sometimes refer to explicit information to focus on some key grammar points to help students avoid mistakes. Yet, the relevance of EI in SLA remained questionable since studies prove it to be irrelevant while some supported it. Many more researches are needed to better help reattribute the role of EI in second or foreign language acquisition.

The current study tries to fill the gap of the controversy. For us, EI is not completely irrelevant in SLA. This study stated that EI only is not beneficial but when it is followed by well-structured activities, either structured phonemic awareness activities or structured input activities can help learners effectively and efficiently acquire the language being learned. In other words, EI is the starting point of learning in second or foreign language setting. Yet, it is not enough for an effective or efficient acquisition. It needs to be reinforced by well-structured phonemic awareness activities (where phonetics and phonology are involved) or by structured input activities (where grammar is involved).

Next, to answer the question how can structured phonemic awareness activities help learners to better acquire their foreign language (FL) phonemes-English?, the current study’s results prove that structured phonemic awareness activities are relevant in foreign language learning for many reasons. First of all, the contrastive analysis of the phonemes of the Mooré and English aimed at raising learners’ awareness of the similar and different phonemes of the two languages, then, followed by phonemic awareness activities helped learners better and correctly attend to the phonemes of their foreign language since they are pushed to identify, produce, and represent those phonemes via structured phonemic awareness activities. The statistical analysis of the research findings revealed that.

The findings of the current research are supported by previous studies including, Reddy and Buckely (2003), Zapporilli and Su (2007), Bae and Fox (2011), and Kissling (2013). DelliCarpini (2002) revealed that over a
course of a year, these adult learners with “little formal education in ESL [English as second language]” did well in PA even though they have not received explicit PA instruction. Reddy and Buckely (2003) showed that although children who received PA instruction did improve in PA and word reading, there was no difference in reading comprehension as compared to children who did not receive PA instruction. The following aspect to address is how PA is used in our research. Hence, we can conclude with reserve that for PA to effectively happen, learners need more than explicit instruction. Hence, a combination of EI and well-structured phonemic awareness activities remain crucial in reinforcing students’ ability to attend to the linguistic features exposed to them. These findings necessarily support this research’s third question which is “How could the combination of explicit instruction (EI) (based on contrastive analysis) and phonemic awareness instruction be relevant and beneficial in FLT?”

In this respect, the Null hypothesis ($H_0$) of this research is rejected, whereas the alternative hypothesis which is stated in three points are proven:

1. Explicit information only is not beneficial in foreign language learning (FLL).
2. Phonemic awareness activities can help learners to better acquire their foreign language (FL) phonemes.
3. The combination of EI based on contrastive analysis followed by phonemic awareness activities pave the way to an effective acquisition in FLL.

The study’s findings prove that EI only is not beneficial in foreign language learning. Yet, the combination of EI and PA activities were proven to be helpful in foreign language learning. This further supported the benefit of combining EI and PA activities in foreign language teaching. In this respect, the null hypothesis ($H_0$) was rejected, and the alternative hypothesis confirmed to some extent with some limits.

**Theoretical and Pedagogical Implication**

As stated earlier, the current study differs from previous ones since it is combining two approaches in one, that is the combination of explicit information based on contrastive analysis (CA) + phonemic awareness activities. The former consists in comparing the phonemes of the three languages to allow learners to see their differences and the similarities followed by the latter which consists in designing structured phonemic awareness exercises that will enable learners to attend to the phonemes exposed to them since they necessarily need to derive meaning from form (Lee and Van Patten, 2003) as well as the salient linguistic input exposed to them (Kuperberg and Olshtain 1996; Selinker, 1992; Smith, 1987; Ellis, 1995; and Robinson, 1995). Hence, learners’ significant performance from the pretest to the posttest is apparently due to the combination of EI + PA.

Few studies are carried on phonetics or phonology with regards to second language learners. In other words, supporting and investigating on the learning of the phonemes and sound systems of second or foreign languages were not at the center of many researches. Rather, they were concerned with various grammatical points in second or foreign language acquisition from (VanPatten & Cadierno, 1993; VanPatten & Oikkonen, 1996; Lee & VanPatten, 2003; (VanPatten and Cadierno, 1993; VanPatten, 1995; VanPatten and Sanz, 1995; VanPatten and Wong, 2003; Cadierno, 1995; Farley, 2001a, Cheng, 1995, and Neupane, 2011). The few studies done in phonetics and phonology focused on mere explicit instruction (Cunningham, 1990; Saito, 2015; and Le Roux et. al, 2017; Chu, Chang, Yu, Yu, Ting and Hu, 2007; Zapparoli and Su, 2007; DelliCarpini, 2002; Huthally, 2008; Saito, 2015; Kissling, 2011; and Kochaksaraie and Makiabadi, 2018).

**Limitations and suggestions for further research**

The first limitation of the current study relates to the sample size and the sampling techniques. The current study uses a relatively small sample size made of 66 participants. With the target population being about 400, a larger sample size could have made a difference. In the same vein, the sampling technique is limited as well since this study did not use random sampling. Rather, the current research uses convenience sampling. Therefore, the findings of the current study should be generalized with caution. In other terms, the results of the current study cannot be generalized to the entire population.

Another limit of this study resides on the fact that all participants are in the same class and completed their 1st year course from the Department of Anglophone Studies, during which they took introductory linguistics and phonetics courses. This affected somehow the current study since participants already had a background of phonetics and phonology. The pretest scores prove that since participants though they had approximately the same level, they all had acceptable scores, which is not common for a pretest. For instance, each group, the CG, EI only group, EI+PA group, had 6.9, 7.5, and 8.1 means values, respectively. A study done prior to participants’ semester courses (namely, introductory linguistics and phonetics) would have yielded better results.

**Conclusion**

The current study verified the efficiency of phonemic awareness activities to the detriment of explicit information based on explanation only. This further supported that the combination of EI based on contrastive analysis (CA) and phonemic awareness (PA) activities is relevant in second or foreign language learning and teaching. We are left with no doubt that phonemic awareness activities approach should be used in second or foreign language teaching setting for such activities help students better attend to meaning of the linguistic features exposed to them.

In addition, further conducting error analysis of data collected could be done to help us know the recurrent mistakes made by learners in their FL upon exposure of the linguistic features of the two languages and the phonemic awareness activities. This could enable us to verify whether the recurrent mistakes derive from similar
or dissimilar phonemes. Hence, this study could agree or disagree with the strong version of the old approach of contrastive analysis according to which different items will interfere or be difficult for learners, or we will discard the traditional approach of contrastive analysis if it happened that the recurrent mistakes do not derive from the divergent phonemes of learners’ languages. It is obvious that this study helped assess the importance of phonemic awareness activities as compared to explanation only, also called explicit information. Yet, it did not address all the aspects of the scope of second/foreign language acquisition, including the part of second/foreign language acquisition which is much more concerned with what affect learning of second language features. Further studies could be done to address this aspect in foreign language learning.

References


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