THE MIRROR EFFECT SYSTEM AS AN INNOVATIVE WAY TO EFL LEARNING

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Résumé

La présente étude mixte porte sur le développement des langues étrangères en général et de l'anglais en particulier à travers l'adoption du système de l'effet miroir. Il a pour but d'examiner l'efficacité du concept de "personne miroir" dont se seraient servis certains colons pour apprendre facilement et rapidement les différents patois des pays colonisés par eux. Pour y arriver, une série de données qualitatives (entrevues et groupes de discussions) et quantitatives (test d'évaluation de la langue Anglaise) ont été recueillies à partir de six (06) **A**pprenants **A**dultes de l'**A**nglais **L**angue **E**trangère (**AALE**), de niveau débutant qui ont volontairement accepté d'être enquêtés à propos de leurs perceptions et points de vue à l'égard de la valeur éducative de cette technique. Les résultats obtenus ont été très concluants. Les participants (83.34%) à cette expérience ont révélé que l'approche de l'effet miroir leur a permis de se débarrasser de la peur de parler leur langue cible et que grâce à elle, ils pouvaient désormais s'exprimer plus aisément et développer une plus grande estime de soi. Au regard de ces résultats, cette étude suggère l'adoption d'un principe similaire pour faciliter l'apprentissage des différentes langues étrangères auxquelles les apprenants peuvent être confrontés.

Mots clés : *AALE, système de l'effet miroir,*

Abstract

The present mixed-method study is about the development of Foreign Languages in general and English in particular through the adoption of the mirror effect system. It aims at examining the effectiveness of the concept of "mirror person" that some colonists would have used to easily and quickly learn the different dialects of the countries colonized by them. To achieve this, a series of qualitative (interviews and focus groups) and quantitative (English Language Assessment Test) data were collected from six (06) Adult **E**nglish as a **F**oreign **L**anguage (**EFL**) beginner's learners who have voluntarily agreed to be surveyed about their perceptions and points of view concerning the educational value of this technique. The results obtained were very conclusive. The participants (83.34%) in this experiment revealed that the mirror effect approach allowed them to get rid of the fear of speaking their target language and that thanks to it, they could now express themselves more easily and develop greater self-esteem. Based on the different outcomes above mentioned, this research work suggests the adoption of a similar principle to facilitate the learning of the different foreign languages that learners may face.

Keywords: EFL Learning, mirror effect system,

INTRODUCTION

The present study through the term "mirror" used as a metaphor, attempts to highlight the benefit of foreign language learning through the 'buddy' (pair-working) or 'mentoring' system. Through a series of experiments, it brings out the way this system is operated by helping one partner of the two-person team learn the native language of the other or a language this latter has a good command of.

Therefore, through the concept of the *mirror effect* in which one of the two partners is the mirror of the other (his/her buddy) or is materialized as being the mirror carrier of the other, the present research work suggested a new way to learn a foreign language from an informal linguistic environment.

Language learning whether it is the first (L1) or second (L2) one, is always a long and strenuous process. Since "the mechanism of the L1 acquisition does not always mirror the one of the L2, the learning of a foreign language looks more difficult than our native language" (Zounhin, 2017, p.370). Therefore, to have a good command of their target language, foreign language learners in general and Beninese EFL learners in particular "need to adopt a learning strategy that could approximate the one they used instinctively to learn their mother tongue" (Ibid.).

It is in the absence of such a strategy that some EFL learners usually decide to embark on the unknown. They strive to travel to countries where their target languages are spoken and where they have the chance to perform a language immersion. Yet, very few of them will have the chance to embark on such an adventure for some motives related to financial means.

However, there are strong reasons to believe that there is a method that could make it possible to experience a language immersion from anywhere; a method that could allow learners, without financial means, to experience the same benefits or realities that language immersion programs to abroad give to their more affluent mates. With this home-made technique, no more worry among those Foreign Language Learners who will no longer have to deal with any financial problems whatsoever. No one can deny the educational value of language immersion (Fortune, 2012). Nevertheless, if there is a way to bring countries, where language immersion programs are performed, nearer to those learners, why not trying to explore it too?

As the saying goes, "what belongs together comes together". Thus, if this aphorism is vetted, it would also probably be so for two individuals who decide to get together or to befriend for the sake of language learning. One who does not have a good command of the language that the other person speaks fluently can decide to learn at the expense of the latter by binding to him/her until he/she succeeds. Similarly, when referring to the psychology of self-help, if the maxim that goes as "the outside acts as a mirror for our mind" is true; then we may be tempted to believe that through a technique of 'binomialism' [1] or mentoring, it is easier to acquire a foreign language by simply pairing up with a companion who is fluent in it.

During the colonial period, several foreign language learning techniques were adopted by settlers who were in search of foreign lands to conquer. Among them

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[1] Specially designed from the word *binomial* (*binôme* in French) derived etymologically from the Latin *binomium* and meaning the fact of "getting in a team of two"

was a method little known but still in effect today and unknowingly used by some of our contemporaries. This is the approach of the *mirror effect* that will be highlighted only during the last century in Italy by "researchers [Rizzolatti et al. (1996, p.134)] who were studying motor neurons responsible for a very simple gesture in monkeys; that of gripping a peanut"[2] (adapted from Côté, 2013, p.9).To quickly assimilate the languages and cultures of their colonies or those who were under their administration, these settlers were becoming friends with some of their daughters or sons. The latter, that were serving as their learning tool, had the duty of making themselves available to them on a full-time basis. They were known as the "mirror person".

It is in the 1990s, more precisely in 1996, that a group of Italian neurologists under the direction of the researcher "Giacomo Rizzolati, Head of the Department of Neurosciences of the Faculty of Medicine of Parma, [will highlight for the first time, the mirror phenomenon that they surprisingly discovered through an experiment], […]"[3] (Adapted from Côté, 2013, p.9). The discovery of mirror neurons constitutes a major advance in neuroscience. Even if, for some researchers (Olivier, 2008), the debates concerning the outcomes resulting from this discovery remain very hypothetical, for a large number of them, mirror neurons are the promoters of language (Rizzolatti and Sinigaglia, 2008).

Therefore, the objective of this study is to examine the effectiveness of the *mirror effect phenomenon* that has a function that is likely to facilitate the learning of foreign languages.

Generating from this purpose, the present study attempts to answer the following questions:

- Is there any relationship between *mirror systems* and the language learning process?
- To what extent can the *buddy (pair-working) or mentoring system* approach help in foreign language learning?

As it has been "hypothesized that mirror neurons in premotor cortices may have played a pivotal role in the evolution of human language and communication" (Rizzolatti and Arbib, 1998, cited in Gruber, 2002, p.77), to provide each of these research questions with a reliable answer, it will be assumed in the present study that:

- Mirror systems through the process of buddy or mentoring method have the function of facilitating foreign language acquisition.

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[2] " Ces chercheurs étudiaient les neurones moteurs responsables d'un geste très simple chez les singes : la prise d'une cacahouète" (Côté, 2013, p.9)

[3] "[…] Giacomo Rizzolati, chef du département de neurosciences de la faculté de médecine de Parme […]" (Côté, 2013, p.9)

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1. Review of Related Literature

The mirror, this "dreaming tool"[4] (Adapted from Bachelard, 1942, p.35), "before being an image of the poet, is itself a producer of images"[5] (Adapted from Michaud, 1959, p.199). To better support, this thought, Michaud (1959, p.199) added that besides being a "source of reflection, [a] rigid surface without which things would be absorbed into oblivion, [the mirror] encourages us to a bit of reflection"[6]. Formerly known as an object of great value during the slave trade, the mirror, since its discovery, has never stopped occupying a place of choice in the mores. Having long been known in western literature as a source of imagination through tales, stories, fables, and science fiction, the mirror remains until today, a strange object. According to Bonhomme (2007), this strangeness "comes from the double paradox of specular perception: on the one hand, the self-reflection in the mirror duplicates the subject; on the other hand, the space of reflection is perceived as the extension of real space beyond the mirror"[7] (Adapted from Bonhomme, 2007, p.2). The double specular, he added, "opens up on identity vertigo, the specular space on ontological vertigo"[8] (Bonhomme 2007, p.2). Therefore, "no wonder [...] that the mirror is one of the passwords [of poets], [...] used as a current metaphor"[9] (Adapted from Michaud, 1959, pp.200-201);

> a word that seems to play for symbolist writers, the role of a catalyst [...] [and] that becomes gradually the center of a network of images and themes which [...] promotes around itself the constitution of a real symbolic (Adapted from Michaud, 1959, p.201)[10].

To comment on this thought, it can be said the term "mirror" is a source of inspiration among caricaturists or iconic writers who use it to better express an idea or a situation. To materialize, express or interpret various ideas, several metaphorical

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[4] "Les miroirs sont des objets trop civilisés, […] ils sont avec trop d'évidence des outils de rêve pour s'adapter d'eux-mêmes à la vie onirique" (Bachelard, 1942, p.35).

[5] "Avant d'être une image de poète, le miroir est lui-même un producteur d'images" (Michaud, 1959, p.199).

[6] "Source de réflexion, surface rigide sans laquelle les choses seraient absorbées dans l'oubli, il nous invite à réfléchir" (1959, p.199).

[7] "Cette étrangeté provient du double paradoxe de la perception spéculaire : d'une part, le reflet de soi dans le miroir dédouble le sujet ; d'autre part, l'espace du reflet est perçu comme le prolongement de l'espace réel au-delà du miroir" (Bonhomme, 2007, p.2).

[8] "Le double spéculaire ouvre sur des vertiges identitaires, l'espace spéculaire sur des vertiges ontologiques" (2007, p.2).

[9] "Quoi d'étonnant, […] que le miroir soit un des mots de passe […] que le poète se plaît à placer à la rime […] ? Métaphore courante, banale même, abondamment exploitée […]" (Michaud, 1959, pp.200-201).

[10] Par le jeu des métaphores en effet, le miroir semble jouer pour les écrivains symbolistes le rôle d'un catalyseur, il devient peu à peu le centre d'un réseau d'images et de thèmes qui, […] favorise autour de lui la constitution d'une véritable symbolique. (Michaud, 1959, p.201).

terms have been conceived or elaborated according to the word "Mirror" such as "**the mirror effect**" or "**Mirror facts**".

In the broadest sense of the term, the *mirror phenomenon* is this behavior that makes us imitate, unwittingly, the words, gestures, and attitudes of our loved ones. Also known as social mimicry or synchronization according to neuro-linguists, "the mirror effect is that unconscious behavior that allows, by adopting the non-verbal codes of a group, the relation to the other [and the life in the community]"[11] (Adapted from Cadreo, 2018, n.p). It is the phenomenon that allows an individual to unconsciously reflect the movements of his interlocutor, such as smiling, frowning, and imitating the way of speaking, walking, pronouncing words for example. Most of the time, it is a reflex action that is manifested in the individual on whom it acts without this latter noticing it immediately. So much influenced or fascinated by the qualities of his/her interlocutor or his/her companion, he barely manages to realize the very close links that could be created between them in a very short time.

In other words, the mirror effect is reminiscent of the saying that goes as *what belongs together comes together*. Yet, in reality, it recalls more the meaning this saying expresses when it is read in the opposite direction. Simply put, *we are known by the company we keep,* that is to say, it is "those who come together that are alike"[12] (Adapted from Cadreo, 2018, n.p).

Several interpretations exist regarding the functioning of this phenomenon. According to some theories, this is a "phenomenon of resonance between the outside and the inside"[13] (Diez, 2017, n.p). Put another way, it's a phenomenon that plays on emotions. It works by basing on "our ability to be touched emotionally by elements outside us"[14] (Diez, 2017, n.p). As evidenced by researchers such as Word, Zanna and Cooper quoted in Cadreo (2018, n.p), following an experiment made by them in the 70s to test this phenomenon, the *mirror effect* can impact positively on the performances of employees in the workplace as well as hiring interview techniques.

In the light of their results, these three researchers who are the most known as those that addressed the issue of the mirror phenomenon have only concluded that the *mirror effect* has a great impact on the recruiting agents during the recruitment process because those agents during this process often start to reflect the attitude of their candidates. However, though none of them has addressed its impact on the development of the learning of foreign languages, it can be assumed if the *mirror phenomenon* is capable of such a result on people, then it could hardly be otherwise

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[11] "L'effet miroir, c'est ce comportement qui fait que nous imitons, sans le vouloir, les paroles, les gestes et attitudes de nos proches" (Cadreo, 2018, n.p).

[12] "Dans les faits, c'est davantage qui s'assemble se ressemble" (2018, n.p).

[13] "C'est un phénomène de résonance entre l'extérieur et l'intérieur" (Diez, 2017, n.p).

[14] "[…] notre capacité à être touché émotionnellement par des éléments extérieur à nous" (2017, n.p).

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for the learners of a Foreign Language that would have taken the habit of expressly imitating a behavior or attitude of a person that they are very fond of because of his/her mastery of their target language and with whom they have enjoyed spending time together. Let's call this individual, "**the mirror carrier**" to allow certain ease in the understanding of the manifestation of this phenomenon during the learning of a foreign language. Indeed, the shedding light on some actions of the mirror phenomenon towards some individuals in certain circumstances as presented above would better allow us to learn about its functioning and its impact on the process of development of a foreign language.

Simply put, the *mirror effect* "is the reflection of oneself through the eyes of others used in education as an instrument of metacognition and as a mediator of knowledge"[15] (Adapted from Phaneuf, 2005, p.1). This concept has been the subject of various studies. Lin (2012) has approached it differently through her research work by bringing out its autoscopic function – **ᵃ** *pedagogical practice aimed at giving an image of oneself through a visual recording;* **ᵇ** *the experience of hallucination in which one sees oneself from outside one's own body*[16]. By applying the mirror-image approach in language teaching, she has discovered that it "offers vivid drilling for students to practice by themselves after class and valid language input for [them] to learn more by themselves" (Lin, 2012, p.193). However, though she pointed out as well that "[this] approach offers teachers an effective way to supervise students' learning after class" (2012, p.193), it is important to note that this function cannot by itself solve the different problems related to the learning of a foreign language that learners encounter very often. It would, therefore, be appropriate to build on these existing results to develop other approaches that can contribute to the success of foreign language acquisition.

Given all the above, it is worth noting the almost non-existence of palpable studies that can answer the various questions of this research work. Still, there are strong reasons to believe that the mirror neurons system does not have a single function. As evidenced by the many hypotheses put forward by several researchers, some of whom are mentioned above, the present study proposes to explore differently the impact of mirror neurons system on language acquisition through the application of the "mirror person" concept in an informal learning context.

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[15] "L'effet miroir est la réflexion de soi à travers le regard de l'autre utilisée en éducation comme instrument de métacognition et comme médiateur de connaissances".

[16] Autoscopy. (n.d.). Collins English Dictionary – Complete and Unabridged, 12th Edition 2014. (1991, 1994, 1998, 2000, 2003, 2006, 2007, 2009, 2011, 2014). [Retrieved July 27 2018 from https://www.thefreedictionary.com/autoscopy]

2. Methodology of the Study
2.1. Research Design

As noted by Mbuthia (2009, p.121), "[a] research design is a blueprint for conducting a study that maximizes the researcher's control over factors that might interfere with the validity of the study". This research work was an *exploratory design* that has been carried out in two phases ; the qualitative and the quantitative one. As specified by Hagan (2013, p.72), in an *exploratory design*, the primary phase focuses more on qualitative than quantitative data. Therefore, this study was initially designed to determine whether there is an interrelation between the system of mirror effects and the language learning process. It was then considered to examine the way this system can help in foreign language learning.

To reach the different purposes of this study adult EFL learners in different bachelor degree studies have been mainly investigated except for those who major in foreign language studies. The choice of participants in this study focused on this type of learner because it is within these that we observe more learners with a really low level in English and simultaneously motivated with an eager desire to improve it.

2.2. Research Participants

The twelve (12) beginners adult EFL learners who volunteered to participate in the study where recruited from three different faculties of the University of Abomey-Calavi in Benin republic; the *Faculty of Agricultural Sciences*, the *Faculty of Economics and Management,* and the *Polytechnic School of the University of Abomey-Calavi*. These Faculties were chosen by random because none of them offers learners the possibility to major in English language studies. The participants were put in two different groups each consisting of six of them. One of those two groups was considered as the experimental group while the second represented the control group. All were beginner adult learners who have difficulty in communicating in the English language. None of them was neither a student in the English department nor majoring in this subject area. Besides, none of them had ever yet embarked on an adventure that could allow them to do a linguistic immersion in their target language. However, they were all aware of their language difficulties and were eager to remedy it. To help them achieve this dream, four (04) native speakers[17] of English (USA, Great Britain) and two (02) speakers of English as a second language (Ghana, Nigeria) who were fortuitously staying in their (learners or partakers)'s home country for a definite period, have kindly agreed to sacrifice some part of their daily rest time for them regularly. Most of those native speakers were visiting the country

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[17] "A 'Native Speaker' (NS) of English [in this research work], is someone whose main or first language (L1) is English and who has learned it first as a child"(Brown, 2013, p.8)

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for reasons of volunteering missions, scientific research, and French language immersion.

The experience lasted six (06) challenging and enriching months. The conditions to participate in this experiment were; to be of the same sex as the mirror partner's to avoid possible worries of affective attachment or harassment, and to be able to either host this latter or to have the means to be around him or her (in his or her company) for at least six (06) hours in a row during a day.

There were two (02) males and four (04) females involved in the experimental group. Their age ranged from 21 to 29 years old. Four of them (01 male and 03 females) were undergraduates (second-year and final-year bachelor's degree students) and two (01 male and 01 female) were first-year graduate students. As for the participants of the control group, they were four (04) males and two (02) females. Their age ranged from 20 to 30 years old. Three of them (02 males and 01) female) were undergraduates (first-year and final-year bachelor's degree students). Three (02 males and 01 female) were first-year graduate students. Only six (06) adult learners (those involved in the experimental group) took part in the investigation.

In general, all the participants had difficulties in speaking and understanding the English language. Apart from the basic notions they had acquired in high school despite themselves and that have allowed them to pass their baccalaureate degree (high school diploma) and be admitted to the university, none of them was interested in the English language learning before being broached during the experiential phase of this research work about the approach which is being investigated. Admittedly, in the curriculum of most of them, the teaching of the English language is oriented to their field of major. However, despite this, they all stayed EFL beginners' learners.

Having seen from afar what they were losing by not mastering the English language, each of them has begun to feel the desire of improving their target language. So, excited to take part in an experiment that could help them raise their level in English, none of them has been begged to be part of the adventure. Moreover, they have all invested in the success of this survey by struggling to find the ideal model companion (the mirror partner) with whom they have taken part in it. Many of them used their acquaintances to find those mirror persons.

2.3. The mirror person's experiment and the development of its process

The experiment took place in both learners and *mirror persons'* [18] places. Most of the time, native speakers such as the US Peace Corps volunteers agreed to spend their lunchtime and much of their evening rest time with the learners. Within a day, they

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[18] Native speakers and those who speak English as a second language that served as a companion (pair-worker) for adult EFL learners

managed to spend about six (6) hours together with the learners for whom they agreed to serve as language coaches. Over the weekends, they were able to spend more than double the time they were habitually able to grant to each other on business days. Given that each of them has to meet his different daily or professional requirements, most of the time, it is only throughout the periods of the evening and during the planned outings of the weekend that they managed to practice the English language. Those Peace Corps volunteers who were also eager to master the French language, which is the first foreign language used in communications in the Republic of Benin visited by them, and one of the local languages that are spoken in most of their place of residence, were happy to invest in this experience. They were even willing to do everything possible for the success of this experiment. As a result, they were also able to take advantage of every opportunity to practice their target language with the help of their host or companion who was very excited as well about being able to be useful to them. Indeed, these learners who felt to be very indebted to their mirror carrier also appreciated making themselves useful to them.

As for the non-native speakers[19] from Nigeria and Ghana, and native speakers from the Great Britain who also agreed to participate in the experiment, they were hosted by the learners for whom they served as language coaches. The learners who had as "mirror person" the speakers of English language from Nigeria, Ghana, and Great Britain, were those who have had a better experience of this instructional approach because they were able to spend more time together with their language coaches than their fellows who were coached by the Peace Corps Volunteers. Since they spent almost all evenings and even nights together with their guests from English-speaking countries, they had more chances to practice their target language with them. Most of the time, they could spend 18 hours together each day. During all this time they could practice the English language for 12 hours including the few periods they managed to have breakfast or lunch together.

2.4. Research Instruments

To examine the hypothesis of the present research work to answers the different research questions, a multiple case study (collection of data through semi-structured interviews and focus groups) has been used. For triangulation's sake, an English Language Assessment Test adopted from Mewald et al. (2012)'s E8 Standards Speaking Test (Cf. Bibliography) was also adopted.

As pointed by Baxter and Jack (2008, p.550), "a multiple case study can allow the researcher to analyze within each setting and across settings, while a holistic case study with embedded units only allows her/him to understand one unique [or]

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[19] "A 'Non-native Speaker' (NNS) is someone who learned a language other than English as a first language, and is learning/learned English as an additional language (L2)" (Brown, 2013, pp.8-9).

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extreme [or] critical case". Besides, "the evidence created from case study design is considered robust and reliable" (Baxter and Jack, 2008, p.550). When we know that a case is "an individual, a program, a class or students, a school, or a community" (Merriam, 1998, p.27); "a methodological approach that involves the in-depth exploration of a specific bounded system, utilizing multiple forms of data collection to systemically gather information on how the system operates or functions" (Chmiliar, 2010, p.1); we can say that the case in the present study deals with the assessment of an educational program (the *mirror person* approach) that has been measured on different EFL adult learners. Through the use of this technique, the present research work values the benefit of the 'buddy' (pair-working) or 'mentoring' system in foreign language acquisition.

In the interest of case study research's restriction and to make sure that the present research work remains reasonable in its perspective, only six EFL Beninese adult beginner learners were involved in the survey. As a result, to explore the way the instructional program (case) that is under investigation functions in the various individual subjects associated with the experiment, the present study which was first designed as a single case study turns henceforth to a multiple-case one.

It is also noteworthy that when collecting data from individual interviews and focus group discussions, respondents were briefed on the purpose of the study and the reason why they were being interviewed. They were, for the most part, sounded out in an approximately noiseless setting at agreed time and place. Moreover, the range of the different interviews was to a certain extent kept open and soft with short disruptions.

In the course of the different interviews, questions of a subtle nature addressed to the respondents, varied from one person to another and were not predetermined as semi-structured ones. The diverse answers obtained from the two categories of interviews were audio-taped and transcribed verbatim for analysis. Moreover, the gathering of the information from each of the two focus groups elaborated during the survey stood for 45 to 60 minutes. Personal information concerning each participant has been kept secret. They were only referred through pseudonyms (See Table 1)

Table 1: Overview of the respondents in the individual interviews and the focus groups

Group Number	Name	Gender	Age	School grade	Faculty or department of origin	Proficiency level in English
One	Ayodélé	Male	29	First-year graduate students	*Faculty of Agricultural Sciences* (University of Abomey-Calavi)	Post-beginner
	Akoua	Female	21	Undergraduate (First-year bachelor's degree student)	*Faculty of Economics and Management* (University of Abomey-Calavi)	Beginner
	Fayomi	Female	25	Undergraduate (Final-year bachelor's degree student)	*Faculty of Agricultural Sciences* (University of Abomey-Calavi)	Post-beginner
Two	Ola	Male	23	Undergraduate (Second-year bachelor's degree student)	*Polytechnic School of the University of Abomey-Calavi*	Beginner
	Femi	Female	28	First-year graduate students	*Faculty of Economics and Management* (University of Abomey-Calavi)	Beginner
	Nékima	Female	22	Undergraduate (Second-year bachelor's degree student)	*Polytechnic School of the University of Abomey-Calavi*	Beginner

2.5. *Validity and reliability*

To assess the reliability of the English Language Assessment Test adopted in the present research work, a test and retest technique has been used on a pilot group made of five (05) EFL adult beginner learners randomly recruited from the Department of Geography and Spatial Planning. Through the Mewald et al. (2012)'s E8 Standards Speaking Test, these learners who were not involved in the experimental study, were assessed (within two weeks between each test) on their communicative competence – (1) linguistic competencies[20]; (2) sociolinguistic competencies[21]; and (3) pragmatic competencies[22] (Council of Europe, 2001, p.108). The correlation coefficient of the retest calculated by using Pearson's correlation was (95%). This coefficient represents very high reliability. To ensure that this language test is valid as far as its construct (variables[23] that are artificial or difficult to measure) accuracy is concerned, the different questions administered to the respondents were elaborated based on some illustrative example of facts they are acquainted with so

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[20] "[…] the knowledge of, and ability to use, the formal resources from which well-formed, meaningful message may be assembled and formulated" (Council of Europe, 2001, p. 109). In the present study, four of the six linguistic competencies identified by the CEFR have been evaluated in the speaking skills test: (1) Grammar accuracy, (2) Vocabulary Range, (3) Vocabulary Control, (4) and Phonological Control.

[21] "[…] knowledge and skills required to deal with the social dimension of language use" (Council of Europe, 2001, p.118). In this research work, respondents have been examined on the basis of their sociolinguistic appropriateness.

[22] "[…] the ability to organize, structure and arrange messages (discourse competence), to perform communicative functions (functional competence), and to sequence turns according to interactional or transactional schemata (design competence)" (Council of Europe, 2001, p.123). From the six pragmatic competence identified by the CEFR, the following four have been chosen to be evaluated in the speaking skills test: (1) Taking the floor (Turntaking), (2) Thematic development, (3) Coherence, and (4) Spoken fluency.

[23] According to McLeod (2008, para.1 and 2), "A variable is anything that can vary, i.e. change or be changed, such as memory, attention, and time are taken to perform a task, etc.[…]"

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that to allow them to understand without any difficulty what they are asked for and find right words to answer them back. By so doing, this test has proved to be valid in its content.

To establish the 'trustworthiness' of the outcomes of the multiple case study, technical methods were applied (Noble and Smith, 2015, p.35). These have to do with "the account of personal biases[24] which may have influenced findings" (Morse et al., 2008, cited in Noble and Smith, 2015, p.35), the acknowledgment of "biases in sampling and ongoing critical reflection of methods to ensure sufficient depth and relevance of data collection and analysis" (Sandelowski, 1993 cited in Noble and Smith, 2015, p.35). Therefore, it has been theorized that at the moment when it would be possible to prove that the collected data were valid and reliable, at the same time it can also be deduced that the instruments used to collect them were to some extent valid and reliable. To be successful in this, a 'wave analysis'[25] procedure has also been used to identify the existence of possible response bias from the respondents. The result of this examination revealed that no significant unconformity exists between the answers given by the first and last informants to most of the survey selected questions. This indicates that there was no potential response bias and consequently connotes that the data collected were valid and reliable so were the research instruments.

2.6. 3.6 Procedures used to analyze the Data Collected from the Survey

To examine the data gathered from the individual interviews and focus groups, inductive analysis methodology has been adopted (Bodgan and Biklen, 1992 and Davis, 1995). It brings into focus the in-depth depiction, analysis, and interpretation of data. Firstly, respondents were permitted to read and review the transcript of their utterance beforehand. Then, data were coded, classified into an interpretive group through the categorization of the different traits and specific features or details that stem from them and that characterize the respondents' outlooks, mental conviction, sentiments, and attitudes. To get there, data were gathered together and examined critically and simultaneously. This permitted to estimate the different traits and specific features or details coming from the data. This encompasses the subsequent five tasks that are: "(1) first-cut analysis, (2) coding, (3) grouping, (4) determination of the correlations, (5) presentation of the traits" (Freeman, 1998, pp.82-119).

As for the data collected through the English Language Assessment Test instrument, there were entered on and assessed by using a computer software program (PASW

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[24] "[…] response bias is a state where individuals who respond to a survey differ significantly from those who are invited to participate but do not respond" (Menachemi, 2011, cited in Mwalongo, 2014, p.117).
[25] "[…] procedure where the researcher groups the returned questionnaires by intervals, such as weekly, and checks to see whether the answers to selected questions change over time" (Creswell, 2012 cited in Mwalongo, 2014, p.117).

21 _ Predictive Analytics Software formerly known as SPSS 21). When developing this speaking skills test, the subsequent indications were those to the regard of which the partakers were given feedback to as far as their communicative abilities are concerned. There are (1) Task achievement and communicative competence[26], (2) coherence and spontaneity of speech[27], (3) grammar competence[28], and (4) vocabulary competence[29]. The test has been carried out by qualified examiners with paired partakers (EFL adult beginner learners) and consisted of the followings three parts:

- Part N°1 (3mn): "**warm-up**". (Partakers acclimate themselves with probers)
- Part N°2 (5mn): "**monologue**". (Each partaker produces a speech built on a verbal and/or visual points).
- Part N°3 (5mn): "**dialogue**". (Two test participants start a dialogue built on verbal and visual points).

Normalized development questions related to the two research questions were used by probers to direct partakers and prevent them from taking long pauses during discussions. Participants were probed on their competencies in oral communication without any preparation and in a context that approximates that of the individuals from their age group.

3. Results
3.1. *Presentation, Analysis, and Interpretation of the Findings*

To examine whether there is a relationship between *mirror systems* and language learning process and estimate the way the *buddy (pair-working) or mentoring system* approach can help in foreign language learning the following data have been collected through open-ended questions.

3.1.1. *Interviews*

To explore the outlook of the participants in the present study regarding the concept of the *mirror person* in Foreign Language learning, semi-structured interview questions have been adopted. Therefore, an open-ended questionnaire was administered to each of the six (06) informants before and after the experiment. However, to ensure that the memory effects do not affect the different findings, the

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[26] Partakers were probed on the strength of their exactness, their ability to develop themes (principally in the course of the monologue task), and their ability to take the floor (mainly while dealing with the dialogue task).

[27] Partakers were examined on their natural ability to speak and pronounce words in an intelligible way.

[28] Informants were probed on their ability to apply grammatical structures accurately.

[29] Test participants were assessed on their vocabulary background and how they control this knowledge.

open-ended questionnaire administered to the informants during the pre-test was different (but parallel or equal in forms) from the one administered to them while dealing with the posttest. The different data gathered together are scrutinized and presented in Table 2.

In short, almost all the participants endorsed the effectiveness of the *mirror effects* on their English language learning. While 83.34% of them confessed that the *mirror person* concept helped them a lot to considerably improve their oral communication skills, 16.66% pointed out on the contrary that this program is not only too constraining but does not give the learner the chance to practice his or her Foreign Language. This can be explained by the fact that all the participants did not benefit from the same conditions of follow-up or assistance from their coach or mirror person. While some (the vast majority of them) had the chance to spend more time (at least 12 hours a day) with their mentors, others, on the contrary, just succeeded in spending very little of this (more or less 6 hours a day) with theirs. This proves that the effectiveness of the *mirror effects* concept depends on the length of time spent with a mentor or coach. In other words, the more the learner spends time with his *mirror person*, the merrier he has the chance to learn a lot from him and practice his new language.

On the other hand, all the participants (100 %) in the experiment mentioned that the *mirror person* concept impacted positively on their listening and decoding skills. According to them, through this program, they can feel now more confident when dealing with listening activities. Some of them contended that thanks to this *mirror effects* concept, they are from now on more interested in English language learning intrinsically[30].

These findings suggest that the language acquisition process occurs through mirror systems. Similarly, this implies that the mirror systems through the process of the *buddy* or *mentoring* method have the function of facilitating foreign language learning.

3.1.2. Results of the Cross-Case Analysis

The cross-case analysis of the opinions put forward by the learners submitted to the experiment suggested the subsequent two main trends as those that corresponded to their perception of the effectiveness of the *mirror person* approach.

⁜ The six (06) informants unanimously confessed that "the mirror person approach is a facilitative program that promoted the development of listening and decoding skills".

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[30] An *intrinsic* learner is someone who is motivated to do an activity in which he has an interest in or engage in a behavior because he is convinced to gain from it some joy, personal recompense, or self-satisfaction. Contrarily to the intrinsic learner, an *extrinsic* learner is an individual who is engaged in an activity so that to reach a goal.

Most of them (five participants) believed that this informal educational program "facilitates oral communication skills". Although one of the participants believed that "the mirror effect system does not allow you to learn at your own pace", all admitted to having noticed a great improvement in their fear of learning the English language.

🞣 The other common opinion expressed by the six (06) respondents concerning the effectiveness of the *mirror effects* concept relates to the fact that "*it helps the learner to acquire a lot of new words and expressions*" and to become familiar with the verbal twitches, mannerisms, interjections, linguistic and whimsical turns as well as the accent of the native speakers. They argued that "*through the use of this concept, the learner improves his vocabulary, pronunciation, and grammar skills*". Most of them believed that all the time they spent in the company of their mentor or *mirror person* has helped them to "*develop different language skills*" that "*allow [them] now to understand instantly and speak without thinking*".

3.1.3. Focus groups

Contrary to the number of people (6 to 10 according to the standards) required for the development of a focus group, this study "for reasons of in-depth studies and reliability" (Cohen and Crabtree, 2006, para.3), divided the number of the participants in two different groups of three beginner learners with common characteristics such as the urge to learn the English language. Each group consisted of 1 male and 2 females.

3.1.3.1. Responses to Focus Group Questions

Of the six focus group questions that were asked the EFL learners, only the responses provided to two of them by those participants are worth mentioning in the present research work.

🞣 To the question: *How can you describe the mirror effects approach?* most of the participants involved in each of the two focus groups mentioned that the approach is an educational program that helps its user to learn a new or foreign language instinctively by just trying to mimic the words, imitate facts, behaviors of a person, or impersonate someone (a mentor or a language coach) having a good command of this language and who is qualified as *mirror person*.

Commenting on the positives of this language learning process, some of them pointed out: "It is a program that makes you dream" (**Fayomi**). "It helps the learner break the ice and get more self-confidence" (**Femi**). "I could not realize from the beginning that will be so interesting. It's a very practical and motivating method" (**Akoua**). "I will just use 3 words to describe it: *original*, *practical* but very *constraining*" (**Ola**). "I will simply say that it is a more or less difficult method to achieve because of its requirements such as finding the perfect native speaker who can serve as a mirror person and the question of availability of the two partners. But I admit that it is a very effective program" (**Nékima**). "It is true that at the very beginning of the experiment, my partner and I had a lot of trouble to frame our programs. But with a little effort, we did it. It took the sacrifice of

some of our priorities to succeed in doing it. I admit that it was a very satisfying experience because it helped me to acquire great ease of speech in the English language" (**Ayodélé**).

➕ To the question: *What kind of language skills have you improved through your participation in this experiment*? most of the informants noticed that they have developed their spoken grammar and listening skills. Some appended that they have improved their oral communication and pronunciation skills. They stated: "before the experiment, I could not even get a single word from the speech of a native speaker or someone who has a good command of the English language. But now, I can do it more and more thanks to the valuable tips that my language coach gave me" (**Nékima**). "What I liked the most during this experience were the feedback opportunities I was able to get from my mentor. He helped me a lot to reformulate my sentences without making any criticism" (**Ola**). "Whenever I was lacking words to say my mind, my language coach was helping me find the right words to say my thoughts. This helped me to improve my oral communication skills" (**Femi**). "I should admit that was very easy for my mentor to get my mind through my gestures or body language. I would even say that she could read my mind and it helped me a lot to improve my language skills such as vocabulary and pronunciation" (**Akoua**).

➕ To the question: What did you like or dislike about the mirror effects concept when experiencing this program? most of them mentioned that it is a "concept that [makes it possible] to learn a foreign language [or any new language in an environment that is similar to that of native speakers]". Some added that "this program has allowed [them] to increase not only their [language background] but also the knowledge of the different cultures which relate to the countries of [the native speakers]". "By spending time with my mentor who is from England, I learned a lot about his home country, his studies, his culture, his customs, his lifestyle, and the way he is used to organizing himself in the everyday life" (**Ayodélé**).

However, one of them noted that it is an approach that would need to be further improved given some limitations that it would present. According to this participant, "this concept might not allow the learner to achieve his/her language objectives" if his/her does not succeed in making compromises with his/her partner (mirror person) or agree with the latter on points such as the respect for the difference in the culture of one another, the notion of humility and the meaning of sacrifice. This participant, unlike his fellow learners, further argued that he "deplored the fact that the program is very [constraining] and does not allow the learner to always follow the rhythm of his language coach". According to him, "it is not [always easy to decode] the words of one's mentor (mirror person)" or simply put, to understand him/her audibly.

3.1.3.2. *Summary of the Cross-analysis of the Data Collected from the Two Focus Groups*

The main trends that can be suggested, from the results of the cross-analysis of the data collected, as those that correspond to the participants' views on the effectiveness

of the *mirror person* approach, are as follows.

- ⚓ The first common belief of all the subjects from the two focus groups deals with the development of their oral communication and listening skills. Most of them believed that the *mirror effects* approach has enabled them to develop their capability of decoding English words and phrases properly. Some pointed out that through this concept, they have acquired many new words, developed more self-confidence, and improved pronunciation skills.

- ⚓ The second common opinion of those participants relates to the fact that they can from now on speak their mind without thinking in their first language or mother tongue. Most of them mentioned that the *mirror person* approach helped the learner to sharpen his new language by providing him with a learning environment that allows him to learn with his ear and practice instantly.

- ⚓ The third common view expressed by those respondents has to do with their self-help development skills. All of them believed that through the experiment based on the *mirror person* program, they learned a lot about time management, the planning of their study projects, the acquisition of several notions of ethics, sociability, and information relating to some cultures and customs particular to native speakers. Most also mentioned all that precede makes them feel more interested in English language learning.

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Case study	Background Information	Description of the *Mirror person* approach	Opinions about *the Mirror person* approach	Analysis and Interpretation
N°1 Ayodélé	He was 29 years old and a first-year graduate student at the Faculty of Agricultural Sciences (University of Abomey-Calavi). Proficiency Level in English (PLE): Post-beginner	He believes that the *Mirror person* approach favors language learning and helps learners to develop their listening and speaking skills. She stated, "It helps the learner to practice his new language and speak very well".	He stated, "[...] by spending time with my mentor who is from England, I learned a lot about his home country, his studies, his culture, his customs, his lifestyle and the way he is used to organizing himself in the everyday life [...]". "I admit that it was a very satisfying experience because it helped me to acquire great ease of speech in the English language".	The analysis of responses provided by the case study N°1 to open-ended and closed-ended questions during the interview session revealed that the *Mirror person* approach has a positive impact on his English language learning. These results suggest that there is a relationship between mirror systems and the process of language acquisition.
N°2 Akoua	She was 21 years old and a first-year undergraduate student at the Faculty of Economics and Management (University of Abomey-Calavi). Proficiency Level in English (PLE): Beginner	She perceives the program as a pedagogical approach that enables learners to practice listening and pronunciation She argued that: "It is a program that may help the learner develop self-confidence as well proficiency in his foreign language"	She pointed out, "[...] I could not realize from the beginning that will be so interesting [...]". "It's a very practical and motivating method [...]"	The analysis of responses provided by the case study N°2 showed that this program can help the learner get a good command of his foreign language. This suggests the mentoring system approach enables the learner to develop listening, decoding, self-confidence, and pronunciation skills.
N°3 Fayomi	She was 25 years old and a final-year undergraduate student at the Faculty of Agricultural Sciences (University of Abomey-Calavi). Proficiency Level in English (PLE): Post-beginner	She described the program as a challenging but interesting one. She supported "It makes the student learn his new language naturally. It requires a lot of sacrifice and commitment from the learner".	She mentioned, "[...] thanks to this approach, I improved my listening and skills. This program also helped me to manage my fear to speak the English Language" "It is a program that makes you dream [...]"	The analysis of responses provided by the case study N°3 to open-ended and closed-ended questions showed that this program can help the learner get a good command of his foreign language. This suggests the mentoring system approach impacts positively on the learner's competence through the development of his listening, decoding, self-confidence, and pronunciation skills.
N°4 Ola	He was 23 years old and a second-year undergraduate student at the Polytechnic School of the University of Abomey-Calavi Proficiency Level in English (PLE): Beginner	He perceives the program is appropriate for foreign language learning. He contended "This approach may help EFL learners acquire the English language in the same way as native speakers".	He stated, "[... I will just use 3 words to describe it: original, practical but very constraining"	Based on the responses provided by the case study N°4 to the questions posed to him, it can be suggested that the buddy (par-working) system approach has a positive impact on the oral production of the FL learner.
N°5 Femi	She was 28 years old and a first-year undergraduate student at the Faculty of Economics and Management (University of Abomey-Calavi). Proficiency Level in English (PLE): Beginner	She believes that the concept is innovating. She asserted, "this program puts students in a learning situation that makes them enjoy foreign language learning".	She mentioned, "[...] It helps the learner break the ice and get more self-confidence" "[...] through this concept, the student develops more interest in the learning of his target language"	Based on the different responses provided by the case study N°5 it can be suggested that a mirror person system is an approach that is worth implementing in any foreign language learning process because it helps the learner improve self-confidence and oral communication skills.
N°6 Nékima	She was 22 years old and a second-year undergraduate student at the Polytechnic School of the University of Abomey-Calavi. Proficiency Level in English (PLE): Beginner	She believes this program is a little bit tricky. She argued, "[...] it does not allow the students to learn at his own pace". "[...]Everything suggests the learner is at the mercy of his partner and this is sometimes embarrassing"	She said, "I will simply say that it is a more or less difficult method to achieve because of its requirements such as finding the perfect native speaker who can serve as a mirror person and the question of availability of the two partners. But I admit that it is a very effective program"	Based on the responses provided by the case study N°6 to the open-ended and closed-ended questions posed to her during the interview session, it can be suggested that the mirror person concept is effective in an EFL learning context though it may require to some extent some restructuring of its process.

Table 2: Presentation and analysis of the data collected through the different individual interviews.

3.1.3.3. *Summary of the Cross-analysis of the Data Collected from the Interviews and Focus Groups*

The synthetic table below is very informative about the outcomes of the six-month time experimentation over the *mirror system* regarding the six (06) EFL beginner learners. Roughly, the learners responded positively to all the questions that they have been asked about their perception of the mirror person concept. Only one of them suggested that the program be improved.

N°	Statements	A	B	C	D	E
Table 3: Descriptive Statistics of the Efficiency of the Mirror person Approach from the cross-analysis of the interviews and focus groups data						
The values contained in this table are in percentage (%)						
1	The mirror person concept helps to improve oral communication skills	-	-	16.66	-	83.34
2	The program is too constraining and do not help to practice FL	50.02		33.32		16.66
3	The program impacts positively on listening and decoding skills	-	-	-	-	100.00
4	The program helps to acquire new words and expressions and become familiar with the verbal tics as well as the accent of the native speakers	-	-	16.66	16.66	66.68
5	The program aids to learn FL in an instinctive way by imitating or trying to mimic the words, imitate facts, behaviors of a person having a good command of this target language	-	-	16.66	16.66	66.68
6*	The program favors the learning of a FL or any new language in an environment that is similar to that of native speakers	-	-	50.02	-	-
7	The program helps to increase language background and the knowledge of the different cultures which relate to the countries of the native speakers	-	-	-	33.32	66.68
8	This concept needs to be further improved because of some of its limitations	83.34	-	-	-	16.66
9*	The mirror concept helps to improve the four languages skills	-	-	33.32	16.66	-
10	I will encourage others to experience similar activities	-	-	16.66	16.66	66.68
11	I have learned to improve my vocabulary and pronunciation skills	-	-	-	33.32	66.68
12	I have sharpened my spoken grammar ability	-	-	16.66	-	83.34
Code	➔ **FL**: Foreign Language **A**= Strongly Disagree **B**= Disagree **C**= Nor Disagree nor Agree on **D**=Agree **E**=Strongly Agree					

*Missing values indicator

3.1.4. *Results of the analysis of the data collected from the Language Assessment Test*

Tables 4 and 5 describe respectively the statistics of the English language assessment test and the different scores required by the **C**ommon **E**uropean **F**ramework of **R**eference (**CEFR**) to each language level. Thus, table 5 helped to interpret table 4.

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Table 4: Descriptive Statistics of the English Language Assessment Test on the Mirror person Approach

Experimental group

		Pre-test											Post-test								
Sexe	Eff (N=6)	S4	S5	S6	S7	S8	S9	S10+	Mean	Std. Deviation	Sexe	Eff (N=6)	S4	S5	S6	S7	S8	S9	S10+	Mean	Std. Deviation
Boys	Ayodélé	0	0	6	0	0	0	0	0,86	2,27	Boys	Ayodélé	0	0	0	7	0	0	0	1,00	2,65
	Ola	4	0	0	0	0	0	0	0,57	1,51		Ola	0	0	6	0	0	0	0	0,86	2,27
Girls	Akoua	4	0	0	0	0	0	0	0,57	1,51	Girls	Akoua	0	5	0	0	0	0	0	0,71	1,89
	Fayomi	0	5	0	0	0	0	0	0,71	1,89		Fayomi	0	0	0	0	8	0	0	1,14	3,02
	Femi	4	0	0	0	0	0	0	0,57	1,51		Femi	0	0	0	7	0	0	0	1,00	2,65
	Nékima	4	0	0	0	0	0	0	0,57	1,51		Nékima	0	0	6	0	0	0	0	0,86	2,27

Control group

		Pre-test											Post-test								
Sexe	Eff (N=6)	S4	S5	S6	S7	S8	S9	S10+	Mean	Std. Deviation	Sexe	Eff (N=6)	S4	S5	S6	S7	S8	S9	S10+	Mean	Std. Deviation
Boys	Bossou	0	5	0	0	0	0	0	0,71	1,89	Boys	Bossou	4	0	0	0	0	0	0	0,57	1,51
	Dado	0	5	0	0	0	0	0	0,71	1,89		Dado	0	0	6	0	0	0	0	0,86	2,27
	Remi	4	0	0	0	0	0	0	0,57	1,51		Remi	4	0	0	0	0	0	0	0,57	1,51
	Gbodja	0	0	6	0	0	0	0	0,86	2,27		Gbodja	0	5	0	0	0	0	0	0,71	1,89
Girls	Tété	0	5	0	0	0	0	0	0,71	1,89	Girls	Tété	0	5	0	0	0	0	0	0,71	1,89
	Ayaba	4	0	0	0	0	0	0	0,57	1,51		Ayaba	4	0	0	0	0	0	0	0,57	1,51

In statistics, the standard deviation is the most commonly used measure of the dispersion of a dataset relative to its mean when the latter is used to calculate a central trend. Therefore, it measures the dispersion around the mean. Moreover, the closer the standard deviation is to 0, the more the data studied are centered on the mean.

On the one hand, the table 4 shows that the scores of most of the learners involved in the experimental group increased considerably from the pre-test (4x**S4**, 1x**S5**, 1x**S6**) to the post-test (1x**S5**, 2x**S6,** 2x**S7,** 1x**S8**). Besides, when subtracting the standard deviation of the post-test from the one of the pre-test the result is positive and close to 0 (Std2-Std1≥ 0). This denotes that the levels of the learners have improved from elementary to intermediate.

On the other hand, the table 4 also shows that the scores of most of the learners involved in the control group have remained quite the same from the pre-test (2x**S4**, 3x**S5**, 1x**S6**) to the post-test (3x**S4**, 2x**S5**, 1x**S6**). Moreover, when subtracting the standard deviation of the post-test from the one of the pre-test the result is negative and close or equal to 0 (Std2-Std1≤ 0). This indicates that the levels of the learners did not change and remain for the most part elementary or pre-intermediate.

To summarize, in light of the different data presented in table 4 that is interpreted thanks to the information provided by the table 5, we can say that the experience of the *mirror person* approach has effectively helped learners to develop their speaking skills. This shows that the *mentoring* system approach is effective in the context of

foreign language learning. It helps the adult EFL learners to develop their knowledge in English.

Similarly, as the analysis of the results obtained from individual interview questions as well as those provided by the respondents to focus group questions revealed that there is a relationship between the *mirror* systems and language acquisition process it can be suggested that the objectives of the present study have been met and that it supports the starting hypothesis of the study.

Table 5: Interpreting score					
	Elementary	Pre-Intermediate	Intermediate	Upper Intermediate	Advanced
CEFR	[A1 A2[	[A2 B1[	[B1 B2[	[B2 C1[	[C1 C2[
Score	[0 5[	[5 7[	[7 9[	9	10 +
	S0,S1…S4	S5…S6	S7… S8	S9	S10…S10+

4. Discussion of the Results

A language, when manipulated with fluency or by an individual who has a good command of it, becomes catching. In other words, the acquisition of a language can be assimilated to a contagious affection of which certain syndromes are nothing other than mimicry, the desire to sound like a native speaker, the desire to resemble a person who has a good command of that language. Thus, we can speak of mirror syndrome when the learner expresses the desire to take part in a language immersion or to practice his target language with native speakers or individuals having a very good command of it. Faced with the various challenges of language immersion, this research work proposed to develop the *mirror effect* approach to bring closer to the learner the techniques and realities of natural language acquisition as seen in the native speaker in a real situation.

In the light of the different results obtained after experimenting with this approach, it can be asserted that the learner of a foreign language is more confident when he/she is in the company of a mirror person that helps him/her to sharpen his/her new language. With this person with multiple functions (those of model, coach, and mentor), the learner is mirrored in his/her specific reflection. When he/she puts into action thought or produces an oral message towards his/her interlocutor or buddy (teammate), the latter projects the reflection of his/her production to him/her while taking the utmost care to provide him/her with all forms of possible constructive feedback. This suggests that there is a relationship between mirror systems and the language learning process.

As the analysis of the results obtained in Table 4 indicates, the learners who participated in the six-month time experimentation with the mirror approach were able to express themselves better than those in the control group who were intentionally deprived of this opportunity. This explains the fact that the language level of the learners in the control group after six months remained, for the most part, as it was at the start (beginner), therefore unchanged while that of those in the

experimental group was mostly improved from the one of beginner to post-beginner and sometimes intermediate. This suggests that the *mirror systems* through the process of the *buddy* or *mentoring* method have the function of facilitating foreign language acquisition. Therefore, it can be suggested that the assumption of the present study is likely.

In summary, when we know that in humans, imitation is a very effective way of learning and that children learn mainly by imitating others, then we can be tempted to affirm as Rizzolatti (1996) that the mirror systems would play also an important role in empathy. They would make it possible "to grasp, to guess, to apprehend more easily what people feel […]"[31] (Adapted from Côté, 2013, p.9). In a region of the brain, it is the emotion itself that is reproduced. For example, when we take lemon in front of people, we see those who watch us take this juice, instantly imitate the unconscious grimaces we make to the intake of this sour product. They also feel empathy for us through the instinctive functioning of their mirror system. In addition to those of learning, imitation, empathy, and socialization, mirror systems would have multiple functions.

When we watch someone's gesture, our brain becomes a real simulator. The neural systems responsible for the gesture are activated even if we remain immobile. This phenomenon would facilitate learning (Rizzolatti, 2006) and help to promote pair-working in the context of foreign language learning. By becoming very attached to someone who has a good command of a language, there is no doubt that we end up being like that person, in terms of vocabulary background, or expressing oneself, and articulating words like him/her. Nevertheless, none of this can be possible if the learner himself does not express a manifest and sustained desire to improve his/her language competence.

CONCLUSION

The present research work set out to explore the educational values of the *mirror effect* approach adapted from a multifunctional system discovered lately (around 1996) in neuroscience that seems to have proven its replicability in several fields since colonial times. Its implementation in the learning of English as a foreign language has enabled highlighting new possibilities that could allow any learner of the foreign language to make a real language immersion without having to go to a native speaker's country.

The different outcomes obtained through the analysis of the qualitative (interviews and focus groups) and quantitative (English Language Assessment Test) data collected from the six (06) volunteer adult EFL beginner learners revealed that there

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[31] "[…] de saisir et de deviner ce que ressentent les gens […]"(Côté, 2013, p.9)

is a relationship between the system of mirror effects and the process of language learning. Moreover, they denoted that this system impacts positively in the learning of a foreign language through the development of listening and speaking skills as well as foreign language anxiety management and personal growth.

Simply put, the present study is meaningful because it has made it possible to highlight a new approach that could revolutionize the world of foreign language learning. Aside from shedding light on the existence of "mirror neurons system, [present] in the lower frontal lobe and the posterior parietal lobe [of the human being]"[32] (Adapted from Hsu, 2009, p.147), it has showcased one of its multiple functions; that of facilitating the learning of a new language.

Still, this research work has some important limitations that can alter its generalization. Given the difficulty of getting in touch with native speakers or individuals having a good command of the English language, and negotiating their period of availability with them, the experiment was carried out only on six adult learners of the English language who have volunteered. Furthermore, the analysis of most of the different data collected was based only upon the participants' self-report assessment.

Therefore, given the different results above mentioned it can be suggested the adoption of a similar instrumental approach to facilitate the learning of the different foreign languages. Moreover, to help to generalize the findings of the present study, further research with a larger number of participants could also be considered.

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[32] "[…] système de neurones miroirs dans le lobe frontal inférieur et dans le lobe pariétal postérieur des sujets humains […]" (Hsu, 2009, p.147).

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