Abstract: Qualified as an international language of communication and development, English is used worldwide and is essential for a country's development. This subject is taught in Malagasy public institutions from the sixth grade and is more advanced in private schools. Rural contexts, which are sometimes complicated and relatively weaker, compared to urban areas, in terms of technology and didactic materials, have an impact on the adoption of this language. The scarcity of linguistic immersion is among the challenges that rural education must face. A number of written questionnaires and oral interviews have been addressed to the target population, such as rural students, English teachers in public and private high schools, parents of students, and educational leaders or advisors. The XLSTAT statistical software was used to derive results that affirm the need to consider the contexts of English teaching and learning in rural areas, as well as the impacts of the linguistic environment. This requires the adoption of modeling, new approaches, and methods.

Keywords: english language; teaching methods; rural contexts; linguistic environment; adaptation

I. Introduction

Language of international communication and development, English has become essential nowadays. This language has been called the « Global Language » by David Crystal (2003) and characterized as « World Englishes » by Jenkins (2014). According to Calvet (2013), it is undeniably a language of globalization.

Mastering this language is an asset for employability in Madagascar. It has become, therefore, a prestigious language like in many countries all over the world. According to Babault « La langue française demeure la marque d’appartenance à une élite sociale » (2006) literary translated « The French language remains a marker of belonging to a social elite ». The dominance of French and English, commonly referred to as 'diglossia', explains the reluctance of rural populations to learn foreign languages compared to urban dwellers. According to the curriculum set by the Ministry of Education, the teaching of English aims to 'train students to be able to communicate orally and in writing, express their personal opinions, appreciate other values and cultures, understand new concepts, and inform themselves about external facts and phenomena, especially in the fields of science, technology, and business.' (MEN, 1997).
The inadequacy of the methods and approaches used in rural areas for teaching and learning English hinders or slows down its appropriation; rural populations have less exposure to foreign languages. Encouraging learners to be more involved in the language they are studying would facilitate its appropriation.

The observed attraction of young apprentices for this language, especially in large cities, is illustrated by the availability of numerous teaching offers via new information and communication technologies (ICTs) such as Facebook, Twitter, Instagram, YouTube, and others. Rural areas, on the other hand, face a problematic situation related to the lack of pedagogical and technological tools.

The choice of our topic has been justified by the non tangible teaching-learning foreign languages results in rural areas. The lack of infrastructure and resources for promoting language learning (books, documents, new technologies, mass media, laboratories etc.) and the sociolinguistic environments in which rural populations live are determining factors.

A question arises from the above: "How can a more effective and appropriate approach be found to improve English language teaching and learning in these areas?" This question is divided into two sub-questions as follows: I n what ways does the sociolinguistic environment of the learner influence the acquisition of the English language? And, to what extent can rural conditions affect the achievement of the objectives described by the curriculum? According to our main hypothesis, a pedagogical approach adapted to rural contexts interferes with English language teaching and learning. This is divided into two sub-hypotheses: "The linguistic factors of parents influence their children's acquisition of English" and "The rural sociolinguistic contexts impact English language teaching and learning."

II. Research Method

2.1 The Study Areas

The study areas are located in the School District (CISCO) of Ambohidratrimo and Atsimondrano. The CISCO of Ambohidratrimo consists of 10 public high schools, including Lycées Ambohidratrimo, Ambotrimanjaka, Ampangabe, Ampanotokana, Antanetibe Mahazaza, Ivato, Mahabo, Mahitsy, Merimandroso, and Talatamaty, as well as around 60 private high schools. This district is located in the northwest part of the Antananarivo Province, in the Analamanga Region, and consists of 24 rural and urban communes over an area of 1,402 km² with a population of 378,099 inhabitants (2021). This area is considered rural due to its population with rural characteristics resulting from the activities undertaken by its inhabitants, such as agriculture, livestock, handicrafts, etc.
The district of Atsimondrano is located in the eastern part of the Antananarivo Province, in the Analamanga Region, and consists of 17 rural and urban communes over an area of 369 km² with a population of 554,478 inhabitants. Its CISCO consists of 15 public high schools and around 100 private ones. The Ampitatafika high school was chosen for sampling in this district.

2.2 Classification of Observations

The classification of observations was carried out in order to characterize groups of parents and students based on their use of the English language. Hierarchical Clustering Analysis (HCA) allowed us to classify parents and students according to qualitative variables using the Ward's aggregation method:

Firstly, regarding the choice of language for teaching and learning (AE): linguistic skills, English proficiency, French proficiency, parents’ place of residence, parents’ levels of education, parents’ field of work, languages used in professional success, availability of foreign language courses for children, ability to assist children in learning English were taken into account. Next, at the level of the rural sociolinguistic environment regarding English: the energy used in the household, preferred type of TV shows, preferred type of radio shows, language(s) of preferred TV, radio, music, use of the internet, use of a dictionary on a mobile phone, practice of English on Facebook. Discriminant Factor Analysis (DFA) was used to reduce the qualitative variables and validate the classification based on similarities between parents and students in terms of linguistic environments. The Benchmarking analysis carried out on Excel software allowed us to identify the characteristics of each group of parents and students based on their linguistic environment.

At the level of numerical data processing, we carried out the following steps: Firstly, the appreciation of the priorities on the use of the English language at the level of parents and students was identified based on the principle of ranking. This principle involves reviewing the correlation of each dependent variable following the DFA analysis; afterwards, the Correlation Analysis between variables in Excel allowed the determination of criteria/variables that have an impact on the behaviors/appreciation of parents and students towards the environment.

Then, the univariate partitioning analysis classified the variables according to their distributions along the X and Y axes based on their homogeneity (W.D. Ficher 1958).
III. Results and Discussion

3.1 Sub-findings 1: Classification of parents of students based on the English language environment

The result of the hierarchical clustering analysis (HCA) produced a dendrogram that separated the parents of students into 3 groups based on the nodes of their homogeneity (Figure 1).

The parents of students working in the field of education (Group of teachers) are separated from those of parents who have other occupations at node 1 of the dendrogram. At node 2, farmers (who work in agriculture and livestock activities) are separated from traders.

The DFA allowed us to validate the classification of the three groups resulting from the hierarchical clustering analysis (HAC), by taking as the initial hypothesis \( H_0 \) that these three groups of parents of students have equal characteristics. The result of the Wilks’ Lambda test by Rao approximation allowed us to reject the \( H_0 \) hypothesis at a significance level of 20% \( (p\text{-value of } 0.01\%) \) and to consider the alternative hypothesis \( (H_a) \), admitting that there is at least one mean vector that differentiates the three groups from each other.

The AFD provides us with a distinct position of the three groups of observations of parents of students along the axes of the factorial plane F1 and F2, with total inertia absorption of 100%. Groups 1 and 3 are negatively opposed to group 2 on the ordinate axis at an inertia level of 27.84%, and group 3 is positively opposed to group 1 on the abscissa axis (72.16% of inertia).
Figure 2. Categorizations of observed group of parents

Group of farmers (C1), comprising 37.5% of the observed parents of students: this group is typically characterized by: parents working in agriculture and livestock (DOM TRAV PRT-1); with very limited English language skills [a little and not at all (COMPT ANG-5, COMPT ANG-4)] and no languages for professional success (LG REUST PRF MLG-0), even though there is heterogeneity in education levels [mostly parents with a BEPC and CEPE level (NIV ETD PRT-2, NIV ETD PRT-1)].

The group of traders (C2), which represents 34.4% of the observations, is characterized by parents working in trade (DOM TRAV PRT-4), with parents having good proficiency in French [average and good (COMPT FR-2 and COMPT FR-3)], and a basic level of education [BEPC and BACC (NIV ETD PRT-2 and NIV ETD PRT-3)], but also having the ability to provide support for their children's English language learning (AID ANG-1) and to offer foreign language courses to their children (COURS LGS ENFTS-1).

Group of school teachers (C3), which includes 28.1% of the interviewed parents, is mainly composed of parents who work in the field of education (DOM TRAV PRT-7) in rural areas (LIEU TRAV PARNT-0), with limited proficiency in French (COMPT FR-4).
Sub-findings 2: Factors involved in the acquisition of the English language

After studying the correlation between explanatory variables related to parents of students, the prioritization of determining factors has allowed us to highlight that the appropriation of the English language by students is based on the capacity and skills of parents, as shown by the first four determining factors in the prioritization (Table 1). The univariate partitioning allowed us to highlight the classes of importance of each dependent variable, and thus to see their significance in the context of the influence on the appropriation of the English language.

We were able to identify three distinct groups: group 1 (group 1 along the X and Y axis) consisting of low English proficiency (COMPT ANG-5) greatly influencing this hypothesis of appropriation, group 2 (group 2 along the X and Y axis) consisting of French proficiency and limited/basic English proficiency (COMPT FR-4, COMPT FR-2, and COMPT ANG-4) supporting this level of appropriation, and finally group 3 (group 3 along the X axis and group 3 along the Y axis) consisting of parents’ education levels, their places of work, and their activities (NIV ETD PRT-1, LIEU TRAV PARNT-0, and DOM TRAV PRT-4).

<table>
<thead>
<tr>
<th>Priority rank</th>
<th>Variable code</th>
<th>Variable name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>COMPT ANG-5</td>
<td>English language skills : Not at all</td>
</tr>
<tr>
<td>2</td>
<td>COMPT FR-4</td>
<td>French language skills : A bit</td>
</tr>
<tr>
<td></td>
<td>COMPT FR-2</td>
<td>French language skills : Good</td>
</tr>
<tr>
<td>3</td>
<td>NIV ETD PRT-2</td>
<td>Levels of education of the parents: CEPE</td>
</tr>
<tr>
<td>4</td>
<td>NIV ETD PRT-3</td>
<td>Levels of education of the parents: BEPC</td>
</tr>
<tr>
<td></td>
<td>NIV ETD PRT-1</td>
<td>Levels of education of the parents: BACC</td>
</tr>
<tr>
<td>5</td>
<td>COMPT ANG-4</td>
<td>English language skills : A bit</td>
</tr>
<tr>
<td></td>
<td>DOM TRAV PRT-1</td>
<td>Parents’ field of work : Agriculture/Livestock farming</td>
</tr>
<tr>
<td>6</td>
<td>COMPT FR-3</td>
<td>French language skills : Average</td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>DOM TRAV PRT-7</td>
<td>Parents’ field of work: Education</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>DOM TRAV PRT-4</td>
<td>Parents’ field of work: Trade</td>
</tr>
<tr>
<td>LIEU TRAV PARMNT-0</td>
<td>Parents’ workplace: Rural</td>
<td></td>
</tr>
<tr>
<td>LG REUST PRF MLG-0</td>
<td>Languages for professional success: No</td>
<td></td>
</tr>
<tr>
<td>COURS LGS ENFTS-1</td>
<td>Offer of foreign language courses to children: Yes</td>
<td></td>
</tr>
<tr>
<td>AID ANG-1</td>
<td>Ability to assist children for English language: Yes</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 5. Class of criteria influencing the appropriation of the English language.*

**Findings 2: Students**

**Sub-findings 1: Classification of students based on their sociolinguistic environments**

The result of the hierarchical clustering analysis (HCA) produced a dendrogram that separates students into 3 groups based on nodes of homogeneity (Fig-6). Students who take English as a living language (C2) are separated from those who only learn English as an educational language at node 1 of the dendrogram. At node 2, students who practice English (C1) are separated from those who do not (C3).

*Figure 6. Dendogram of students clustering*

DFA allowed us to validate the classification of the three groups of students resulting from the hierarchical clustering analysis (HCA), assuming as the initial hypothesis (H0) that these three groups of students have similar characteristics. The result of the Wilks’ Lambda test using Rao’s approximation allowed us to reject the initial hypothesis H0 at a significance level of 20% and a p-value of 0.01%, and to accept the alternative hypothesis Ha that at least one of the mean vectors distinguishes the three groups of students from each other.

The DFA provides us with the distinct position of the three groups of parents’ observations along the axes of the factorial plane F1 and F2, with total inertia absorption of 100%. Groups 1 and 3 are negatively opposed to group 2 on the x-axis with an inertia level of
60.35%, and group 1 is positively opposed to group 3 on the y-axis with an inertia level of 39.65%. Group 2 has a strong heterogeneous characteristic that opposes each other along the axis.

Figure 7. Categorization of the observed groups of students

Group of practicing students (C1), comprising 29.0% of the observed students: the group is typically characterized by: students who watch television shows such as "news" and "clips" (NEWS-1, CLIP-1) and listen to radio programs, especially "stories" and "news" (RAD HIST-1, RAD NEWS-1), with languages of communication in French and Malagasy (LANG TV: FR-1, LANG TV: MLG-1), but with varied musical languages, especially in French and then in English (LANGUE MUSIQUE: FR-1, LANGUE MUSIQUE: ANG-1). The advantage of this group is the use of electricity networks provided by JIRAMA at home (JIRAMA-1).

The group of students taking the foreign language (C2) represents 33.8% of the observations. This group is characterized by students living in the city of Tana (CISCO-2), with a great advantage of using internet technology (INTERNET-1). In addition, their preferred language of music is English (LANGUE MUSIQUE: ANG-1) with radio programs mainly focused on music (MUSIQ-1).

Group of non-practicing students (C3), which accounts for 37.2% of the interviewed students, is mainly composed of students from the Antananarivo Atsimondrano area who only use Malagasy and French languages (LANG TV: MLG-1, LANG TV: FR-1) in their daily lives. They prefer radio programs such as "documentaries" and "music clips".
Sub-findings 2: Function of learning the English language

After studying correlations between explanatory variables related to students and their sociolinguistic environment, the ranking of determining factors allowed us to highlight that learning English among students is a function of the mode of communication [especially the diffusion of "news" and "clips" (NEWS-1)] and the languages used for transmission, as shown by the top 8 determining factors in the prioritization (Table 2). In general, the result of this scaling has shown that currently English is in third place among the languages used for transmission in learning.

The univariate partitioning allowed us to identify the classes of importance of each dependent variable, and to see their significance in the context of influencing English language learning. We were able to identify five (3) classes, more or less interacting with each other: Class 1 (class 1 along the X-axis and classes 1, 2, 3, 4, and 5 along the Y-axis) grouping the learning tools and language for English (LANG TV: MLG-1, MUSIQ-1, RAD NEWS-1, INTERNET-1, CISCO-3) greatly influences this learning hypothesis; Class 2 (class 2 along the X-axis and classes 1, 4, and 5 along the Y-axis) grouping the support functions (NEWS-1, JIRAMA-1, and CISCO-2) supporting this learning ability; and finally, Class 3 (class 3 along the X-axis and Y-axis) grouping additional functions of students’ education (CLIP-1 and RAD HIST-1).

Table 2. Order of importance influencing the English language learning

<table>
<thead>
<tr>
<th>Order of priority</th>
<th>Variable code</th>
<th>Variable name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CISCO-2</td>
<td>Cisco : Tana city</td>
</tr>
<tr>
<td>2</td>
<td>JIRAMA-1</td>
<td>Energy used at home : Jirama</td>
</tr>
<tr>
<td>3</td>
<td>NEWS-1</td>
<td>TV programs genre: News</td>
</tr>
<tr>
<td>4</td>
<td>CISCO-3</td>
<td>Cisco : Atsimondrano</td>
</tr>
<tr>
<td></td>
<td>CLIP-1</td>
<td>TV programs genre: Music video/clip</td>
</tr>
</tbody>
</table>
Discussions 1: around the factors influencing English language acquisition

Sub-discussions 1: The English language environment of parents affects their ability to assist their children

The three groups surveyed (Group of farmers C1, Group of traders C2, Group of teachers C3) have shown that the language environment of parents affects their ability to guide their children. With these 37.5% of parents observed in the group of farmers, their English language skills are very limited due to their manual work nature (agriculture and livestock), which does not require much intellectual capacity (Schweitzer, 2002). Indeed, in developing countries such as Madagascar, most farmers do not have formal education qualifications to make a living (Fanampinirina, 2016). Their education qualifications do not exceed the BEPC\(^1\) level. The agriculture, livestock, and fishing sectors are key to reducing poverty and improving food security in the country. Indeed, they support 75% of the country's population, represent 86% of jobs, and 60% of youth employment. In terms of education in Madagascar, the figures are alarming. In total, 76.7% of the Malagasy population cannot read, write or count. This figure was released on Thursday, September 8, on International Literacy Day.

Indeed, this observation negatively affects the abilities of parents to help or guide their children in learning English at home. According to our study, for these surveyed parents, the language of success for their profession is only Malagasy and not French, let alone English.

For group C2, which represents 34.4% of the observations and consists of traders, their

\(^1\) BEPC stands for "Brevet d'Etudes du Premier Cycle" in French, which is a middle school diploma in Madagascar.
proficiency in French is described as "average" and "good". In the field of commerce, French is moderately used due to the vocabulary, instructions, and linguistic environment related to it. French, despite being at a lower level of competence, is indeed used in the country; this is related to the dominance of the French language (diglossia) and the French colonization in 1894 (Matthey, 2021).

According to the observations made, parents' levels range from BEPC to BAC\(^2\); already allowing them to provide guidance to their children in English language learning (for example: homework, texts, grammar). This group is considered to have a middle social level and the capability of providing language courses for their children. Group C3 represents teachers (28.1%), meaning those with very low monthly salaries of around 60 to 100 thousand Ariary for private schools in rural areas, or just a few cups of rice offered by FRAM parents\(^3\), or a salary of 300 to 400 thousand Ariary per month for civil servants. This group can be considered, therefore, as having a very low social and financial level, as well as low levels of education, which do not allow them to help or guide their children in their studies or in learning the English language. Their linguistic environment is very limited and their skills in French and English are extremely weak (Rakotoanosy, 2007).

**Sub-discussions 2: Factors influencing the acquisition of the English language**

The three groups are well distinct, with class 1 comprising low English proficiency greatly affecting the hypothesis of English language appropriation, group 2 comprising French language proficiency and limited/basic English proficiency (COMPT FR-4, COMPT FR-2 and COMPT ANG-4) supporting the level of appropriation, and group 3 comprising parents' education levels, their places of work, and their activities (NIV ETD PRT-1, LIEU TRAV PARNT-0 and DOM TRAV PRT-4). These results show that the parents' low proficiency in English is the first factor negatively influencing the students' appropriation of English. This being said, the acquisition of a foreign language is hereditary; the more multilingual the parents are, the more their children will be. In addition, the sociolinguistic environment in the household greatly affects language acquisition. Many studies and experiments conducted around the world on the impact of the family on the acquisition of French as a foreign language have led to the conclusion that, in addition to the school environment, the family and socio-cultural environment play an important role in the process of learning and acquiring foreign languages (Boutarfa, 2020). In rural areas, this environment is very poor due to the precariousness and lack of pedagogical or technological tools, which are necessary in learning English.

The parents' level of education, their activities, and their workplace also influence the students' acquisition of English. The social status or level of the students' parents has a significant impact on their competence in English or French (Place, Vincent, 2008). Some sociolinguistic researchers even argue that French is a "language of social promotion." (Hagège, 2006), and English is considered as “the language of elites”(Montaut, 2004). Only those who can afford to enroll their children in French/English-speaking schools, exclusively reserved for the wealthy (minimum tuition of 600,000 Ariary per month), have the ability to easily appropriate foreign languages. In these places, the methods and approaches are effective and modern, with very efficient pedagogical tools, modern technology tools, etc. The English language, despite its importance in the fields of tourism and international commerce (Bibauw, 2006) has until now played a limited role in the country, which is why its adoption has been

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\(^2\) The Baccalauréat, often referred to as the "Bac," is a high school diploma in France and other French-speaking countries. It is the equivalent of a high school diploma in other countries, and is awarded to students who have completed their secondary education and passed the required exams.

\(^3\) FRAM stands for “Fikambanan’ny Ray Aman-drenin’ny Mpianatra” which means "Parents’ Association"
limited in rural areas. The precariousness and lack of ownership of this language remains a barrier for rural populations in terms of employability. English is attributed with remarkable social functions and enjoys positive perceptions compared to other languages perceived as difficult (Castellotti and Moore, 2007).

**Discussions 2: Sociolinguistic environments and the use of new technologies have an impact on the acquisition of English**

**Sub-discussions 2: The sociolinguistic environment of students influences their acquisition of the English language**

For the group of students practicing English (C1), comprising 29.0% of the observed students: this group watches television programs such as news and clips, stories with communication in French and Malagasy. The language for music is mainly French and English. It can be observed that the use or practice of English in listening (music, TV, radio, internet) greatly influences its learning (Atlan, 2000). This observed group has an advantage in the use of JIRAMA electricity networks in their households. The Group of students taking English as a foreign language (C2) represents 33.8% of the observations; this group is characterized by those living in the city of Antananarivo (CISCO-2), compared to rural learners. This group has a tangible advantage in the use of internet technology and English as the preferred language of music. This shows that the sociolinguistic environment in urban areas is not the same as in rural areas. In big cities such as downtown Antananarivo, new technologies are more accessible as they flood the markets and are within people's reach. However, this situation is not evident in rural areas; rural residents being more preoccupied with their daily lives and precariousness (Coquelin, 2007). Indeed, technology is one of the most effective and fastest means in learning the English language given the presence of this language in social networks, the internet, and so on. More language practice facilitates its appropriation. In order to prepare for successful employment from a young age, it is therefore necessary to appropriate the English language more fully. In almost every field of work, it remains the language of international commerce (Hammond, 2014). Thanks to the economic power of the United States and the influence of English in its colonial empire, this language has become the primary language of the business sector.

**Sub-discussions 2: The English language used in TV, music, internet, and news on the radio greatly influences the appropriation of English.**

The energy provided by JIRAMA or renewable energy sources is very useful in the operation of TV, internet, music, and all communication devices (Ludovic, 2020). However, in rural areas, this advantage is not always accessible, either due to technical or financial limitations. Those who use English as their listening language (in movies, music videos, stories, chats, etc.) have more tangible advantages. This daily practice greatly affects the adoption of English for students, parents, and teachers. There are numerous free offers available on social media, including the popular Facebook platform, used by many Malagasy people, such as "English with Gracia," "Pronunciation with Emma," "Accent's Way English with Hadar," "Learn English with Bob the Canadian," etc., catering to learners at different levels. Mastering the English language is a major asset in terms of employability; those who have a strong command of English have a comparative advantage in terms of employability and professional integration (Erling, 2015) and those who are multilingual are more advantaged in terms of salary (Wauthion, 2010). Young people are currently drawn to learning this language given globalization, and employability is becoming increasingly multilingual with the flow of international businesses (Sebire, 2021).
V. Conclusion

The levels of education and social status, proficiency in English and/or French, activities, and workplace of parents have a significant influence on the adoption of English by rural students. For learners, the use of technology or new technology such as televisions, radio, music videos, internet, various social media platforms, greatly affects the learning of this language. This situation is similarly applicable to language teachers, especially English teachers, who may not have access to English in their daily lives. Unfortunately, this situation has its complications in rural areas. Total immersion is effective and rapid if one wants to appropriate the language correctly. What, then, are the steps to follow in order to access it?

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