ACCESS TO MEDICAL INFORMATION AND THE ROLE OF ENGLISH LANGUAGE IN AN ALGERIAN SELECTED COMMUNITY: MEDIA AND MODES OF EXCHANGE AMONG THE PAEDIATRICIANS

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Summary

The fundamental concern of this thesis is the plethora of systemic difficulties facing the Algerian nation with a study of one particular issue, most neglected, that of language. The thesis explores language use and makes an in-depth study of one Algerian community in order to diagnose the consequences of current policy and to suggest steps to remedy the endemic problems. The thesis addresses the issue of language as power in Algeria, which stems from three historical contexts: the colonial dominance of French, the revolutionary choice of Arabic and the globalisation of English as 'lingua franca'. It reviews the question of 'lingua franca' in the development of the nation.

The group studied is the medical faculty of the university in Constantine, which may stand as a microcosm for the macrocosm of the whole of the Algerian research community. This group has a complex linguistic repertoire, including varying levels of competence in the three competing lingua francas present in Algeria. The choice of the Algerian scientific community as a focus of the study stemmed from its particular position as a group which needs to acquire the language which permits it to enter the 'International Research community'. The language needed, at present, is **English.** Research on the ability of the particular group chosen to access English medium knowledge and participate in international English medium academic circles may aid to assess the impact of English use as a world lingua franca on the Algerian scientific community as a whole.

The utility of this research will stem from the insights it gives to the needs of this specific Algerian community of 'medical doctors' as they acquire English to help them to overcome the linguistic barrier to international communication. They need to develop English as a tool, both efficiently and effectively. Many countries, especially developing ones like Algeria, cannot afford the cost of inefficiency in language use, so some interest has arisen in the issue of effectiveness and efficiency in language acquisition and use.

In Algeria three international languages are competing for the development of the country. These languages are assigned different values. Arabic reflects the soul of the community, English clearly has a powerful instrumental value and French was imposed by colonialism (see below). The danger is perceived to be that, while maintaining English at the expense of French, Arabic risks being displaced as a language of the negotiation system.

First, an overview is given about the use and the dynamics of the four languages in Algeria; Arabic, Berber (Tamazight), French and English.

Second, research instruments in the form of in–depth interviews, questionnaires, observation, etc., used in a qualitative approach have been developed to investigate the members' mechanisms of intercommunication as well as the genres they use in order to achieve their aims; that is the dissemination of their work to the international research community (IRC).

Third, On the basis of this (first and second points above), recommendations are made to help solve the problems of the community in accessing information.

For my beloved family

For my beloved daughters
Malia, Hannah and Yasmin

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

In the lives of individuals and societies, language is a factor of greater importance than any other. For the study of language to remain solely the business of a handful of specialists would be a quite unacceptable state of affairs.

(Saussure, 1993:5)

1.1 Language: the global situation

During the last decade, the whole world witnessed a complete change in political, social, economic and cultural spheres, rarely experienced before in history. The fall of the Berlin Wall and the collapse of the Soviet Union and other communist regimes brought an end to the Cold War and at the same time destabilised the political world by a geopolitical reconstruction. In the social domain, the world witnessed the growth of democracy; there are more democracies now than ever before and the claims of national sovereignty cannot be used against the demands of human rights. In the economic domain, free market capitalism dominates; culturally, new audio-visual and information technologies have broken down barriers and constructed worldwide communication networks. While it would be naive to think that old style nations and nationalisms are redundant, nevertheless, it is clear that there is a new global community which is in the process of establishing itself. The interest for the thesis in these social trends is that each of them has contributed to the growing dominance of English as a lingua franca. English dominated after the victories of the Second World War and the Cold War. English is the language (along with French) in the international courts of human rights. English is the language of the global markets. It is the language that dominates on both the big and small screens of the technological revolution.

This thesis will examine the case of the Algerian medical community who are under pressure to acquire and use this lingua franca.

Throughout the centuries, the use of a lingua franca has mainly contributed to the exchange of information within or between different communities in people's quest for understanding each other. Nowadays, it is believed that one common language, used for either business or research, simplifies negotiations, increases transactions and facilitates exchange of scientific and technological information. At the present time this increase of global competition has also led to the increase in business transactions between different countries, technological development and scientific exchange. However, communication skills and linguistic mastery have also become a gateway to this global community. To increase one's business, for example, managers are not only required to know how to negotiate and discuss over prices, sales terms, contracts, etc. but are also, most of the time, required to do so in a language which is foreign to them (Kamada, 1996). Recruiting interpreters could, on one hand, be ineffective as they are not necessarily experts in the fields under discussion, on the other hand, costly.

In the field of research, scientists and technologists who require information about the latest developments in their field have, most of the time, to access it in a foreign language. However, these people have little time to develop the tool that is most essential for access to the information they need. That tool is language. And as we have already stated the present need is for English which has become the world lingua franca in science as well as in business. It goes without saying that this fact greatly favours the English–speaking nations.

The questions that thus arise here are:

- What is the situation with non–English speakers having to communicate with each other?
- What their modes of communication are and in which language?
- How efficient are these modes?

1.2 English: the dominant language/lingua franca

A number of languages have played the role of lingua franca in the past; Greek in the pre-Christian period, Latin in the early centuries of the first millennium, Arabic during the 7th

to 15th centuries, French in the early Modern period, Russian in the communist world. Now the global lingua franca is English.

English has now become a language of wider communication and occupies the second position in the world after the Chinese language with an estimated 1500 million of people who express themselves in English (Crystal, 1998). This increase of use of English in our world does not seem to see any limit but on the contrary it becomes more and more natural. One can notice the number of conferences, all over the world including Asia and Middle East (Shaub, 2000), that are given in English. The official language of the last conference on AIDS held in Paris in 1997 (Hellal, 1997) was in English. It is assumed that one of the keys to Ericsson's success (Swedish telecommunications company) was to impose the use of English as an official language, not to mention the other international meetings as the IMF (International Monetary Fund) where English is naturally the members' tool of work (Hellal, 1997; Crystal, 1998; Shaub, 2000).

Indeed this language is also becoming incredibly popular in Europe. In France, for example, 96% of primary school children choose English as their first foreign language (Hellal, 1997). The use of English terms in most German TV programmes is noticeable and not even translated. The same fashion can be seen in Italy where headlines of their newspapers contain words as "killers" of the Mafia or the "big" for business people. English is also spoken more and more in Scandinavia, Russia and other parts of Eastern Europe (Petzold & Berns, 2000). English use is a reality that does not any longer limit itself to tourism, but is very much required by important employers and many other well known institutions, such as "les grandes écoles" (Hellal, 1997; Friedrich, 2000; Shaub, 2000). The other national languages of Europe which were also languages of wider diffusion are being eclipsed.

How did English impose itself as a universal language? Historically, in the 19[Th] century, French was the language of the European intellectual elite. The Versailles Peace Treaty in 1919 was the first indication that English might gradually replace French in its diplomatic role. At the end of Second World War and with the emigration to USA of many German and other European scientists, technology was obviously going to develop and be expressed in English. The use of English at universities is simply due to the fact that most research and findings are disseminated to the academic world in English and this feeds on

itself. The rise of English was due at first to the power of the British Empire. The rest of the explanation for this spread is linked to the power of American world development after the second World War (Crystal, 1998).

As the English language has been recognised and partly accepted as being a universal language it has presented a burden on speakers of other languages who want to have their work read and cited. It is particularly an impediment to the researchers' efficiency to make greater contributions in the international research community. It is argued that in addition to the existence of a less supportive research environment, the lack of language skill explains the low participation or indeed exclusion of less developed and smaller countries (Swales, 1987a; Baldauf, 1986). Moreover, Swales reported that: "Russel (1984), in his paper on psychology in its world context, has shown how the dominance of English as a universal language in Psychology limits the potential development of psychology as an international discipline" (Swales, 1987a: 51). Furthermore, Maher (1986:206) pointed out, 'in Japan, where knowledge and information are regarded as key natural resources or raw materiel, English possesses a unique role as vehicle or mediator of such resources'.

1.3 Shakespeare or Voltaire, French or English

In France, the 'Toubonistes' (followers of the Toubon Law of 04-08-1994 concerning the defence of French language) were convinced that the strongest way to affirm one's identity is to maintain one's language and are 'scandalised' by realising how French language is failing to keep the privilege of being a language of science (El-Watan, 10-06-1997), now that English has emerged as a medium of international communication in different areas, including science and technology.

The Toubon Law introduced in 1994 tried hard to make an end to this invasion of English; the "Délégation Générale à la langue française" already had this role of co-ordinating the work of Terminology Commissions in each Ministry to set up an agreed list of words as substitutes to the English ones; for example, *air de stationnement* to replace *parking* and *balladeur* for *Walkman*, etc. However, this Commission's attempt to propose French terms for English borrowings was criticised. The latter language was much favoured, by the public, partly for linguistic reasons. It is worth citing Ager (1997) on this issue:

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The winner among the European languages in terms of its international and widespread usage is however clearly English...Although there are political and commercial reasons for this there are also linguistic reasons. English is particularly noticeable for the ease with which it borrows and incorporates words from other languages. Its vocabulary is after all a mixture of Germanic and Latin roots and it borrowed massively from French until the fourteenth century. English is a comparatively easy language to learn: no complicated morphology and a fairly straightforward grammar. English speakers are tolerant and they are quite happy to understand a pronunciation which is not that of southern England. (Ager, 1997:52)

Duby (cited in Confland, 1990) admits to the linguistic 'virtue' of English which he also sees as being a much simpler language, but argues the fact that non–English speakers are put in a position of inferiority.

However, there also exist a great number of researchers, French and others, who do not regard the dominance of English in science as a threat to one's identity but as a tool and a facilitator for the transmission of knowledge. One common language is said to be both useful and effective in order to communicate the important research findings and exchange of information between the different scientists of the world (Lehn, 1996). Sandoz (1981) claims that English happened to be the language of scientific communication. It is unfortunate that many nations have been deprived of this entitlement. However, he argues, the most important is to be able to communicate; they (scientists) can do it in English without losing their identity. In his words:

l'anglais est la langue dans laquelle les scientifiques du monde entier peuvent se comprendre. Les Français regrettent évidemment que ce ne soit pas le français, les Allemands que ce ne soit pas l'allemand, etc. L'important est que les scientifiques de tous les pays puissent communiquer entre eux. Ils peuvent le faire en anglais sans autant perdre leur identité culturelle' (Le Monde 31–10–81).

That is the background to the study. This study shows how a section of the wider society is blocked in its efficiency and effectiveness by a language problem and may perhaps be useful as an example from which we can extrapolate to Algeria as a whole.

1.4 Aim of the study and its significance to Algeria

In Algeria where the policy has been 'Defrenchisation' (getting rid of French Language) and a considerable move towards Arabisation, one wonders what the impact of English is when it is imposed by external circumstances as just mentioned above. It is worth noting at this stage what the nature of the problem is in this country.

In a country where there already exists a complex linguistic situation as in Algeria (which will be discussed in detail in chapter 3), language factors can seriously affect this achievement of goals as well as the whole efficiency of the country's system of communication. The situation is further aggravated where it becomes necessary to have to recourse to a non–mother tongue for the achievement of the nation's objectives. The drawbacks of language diversity have been recognised by some scholars. For example Pool (1972) claimed that

> ....language diversity of one sort or another is held to cause the retardation of development, both political and economic.... slows economic development by for example, breaking occupational mobility, reducing the number of people available for mobilisation into the modern sector of economy, decreasing efficiency, and preventing the diffusion of innovative techniques (Pool, 1972:222).

Later on, this has been challenged by Phillipson (1992) and Canagarajah (1999).

In Algeria there are various languages which hold different positions and play different roles. Among them French and Arabic emerge as the main ones for different reasons. On the one hand, Arabic became the official language at independence in 1962, and on the other hand, French remained the most used medium in education, administration, industry, etc. This situation lasted until the late 1980s when, for political reasons, the state moved under great pressure to put Arabic firmly in the first place.

Among the educated communities English has become a new focus of interest because it is considered, as said above, to be a key factor in improving the economic situation through industrialisation and trade and in allowing different research communities to reach international recognition. Arab (1990) highlighted this position by saying:

La maîtrise de l'anglais, perçue par l'étudiant, le professionnel et le corps social en général, comme un atout non négligeable dans l'ascension sociale, s'inscrit en fait dans le contexte plus vaste de la 'normalisation' de notre société dans la 'modernité (El Moudjahid, 15-11-1990).

Thus the student, the professional and society in general perceive knowledge of English as an asset which helps social mobility. The use of English is in fact a step towards a modern society. However, this declaration is not easily fulfilled and the human and other resources necessary to provide courses are often lacking. Ways of teaching/learning must be investigated in specific areas to improve the level of English for these communities. Surprisingly, in 1993, the Algerian government, during Ahmed Djabbar's ministry, supported some educators' decision to implement English as a first foreign language (alternatively with French) at the primary school (see chapter 3) despite the fact that there is a complete lack of any English language pedagogical material suitable for this age group.

Although Algerians are perceived as being prepared to learn foreign languages fast (Taleb-Ibrahimi, 1997), the problem, however, remains with the extent of their exposure to English and their friction with its culture. Thus results are not as good as they could be. Nonetheless, a positive awareness seems to arise among these people about the importance and use of this language on the international arena which, therefore, encourages them to invest more in it. Job advertisements are daily published on the national newspapers in which knowledge of English is one of the prime conditions of employment. As this seems to have become a key to professional success more youngsters, professionals, students and even teaching staff at all levels enrol in English courses. These courses, either specific or general, intensive or not, are mainly delivered in private schools or other venues. Although business English is the highly demanded type for commercial purposes, other kinds are also provided (Hellal, 1997).

1.5 Objectives of the Research

Algeria is one specific example of how globalisation and the spread of English as a lingua franca has affected a society. It is a particular example because it fought the market forces which bring English into the community because the country had a stronger religious, cultural and political agenda.

This thesis concerns itself with the role of language in society with particular reference to a developing country, Algeria. In particular it reviews the question of a lingua franca in the life of a research community. Any developing country wants and needs to maintain its position in the world. However, in order to achieve its national development and objectives, the linguistic vehicle of such a developing nation needs to be efficient and effective. An inefficient use of language might affect the system of the country in the process of its development.

The efficiency of the whole system is the sum of the efficiency of the parts of this system. A research community represents one important part of a national system which might block the country's development if it were not running efficiently. We will focus on the Algerian research community, and because of the limits of this research, one particular part of that research community -the medical fraternity- will be considered for investigation; that is the efficiency of language use in one specific research community. The efficiency of communication within any community is only achieved if there exists a purpose and some shared understanding between the members to accomplish this purpose. However, for any understanding to take place there must be command of both linguistic and negotiation skills. Therefore, a good command of language and an efficient control of negotiation skills are necessary conditions for an individual to achieve social mobility and consequently help the country to achieve its goals. These skills are certainly not impossible to learn where they have not already been acquired by the concerned members.

Consequently, the purpose for looking into the micro sphere is to be able to extrapolate to identify the macro problem of language choice in the Algerian language policy as well as analyse its role in the country's development. Then, the objectives of this research are not only to describe the role and importance of a lingua franca in Algeria but also

- To assess the efficiency and effectiveness of individual's communication in this global, lingua franca dominated system;
- To determine the importance of such languages in this domain, essential to the development of a country;
- To investigate the best way to encourage access for these doctors to the international community.

The non–native speaker of English is impeded from disseminating his/her work to the world because of a lack of linguistic skills. Therefore, it is the aim of the present study to examine the progressive importance of a language in one specific scientific community and explain how language could act as a barrier to international communication. It is also the attempt of this research to propose steps to remedy the situation. That is: how barriers can be overcome both effectively and efficiently with a special reference to Algeria where this research is undertaken.

There will be particularly a closer investigation into the efficiency of the mechanisms of intercommunication between the members of the medical community studied and also their relationship with the international level. Aspirant members wish to join the 'discourse community' (see Swales 1990 and chapter 2). Established members may wish to help them. The assumption that is put forth in this thesis is that if full membership has not been assigned to the members of any Algerian scientific community to join the International Research Community (hereafter, IRC) it is because they cannot meet all the criteria required by those communities. There is a risk of non-absorption as mature members into the target community that will, consequently, lead to failure to adopt the community's shared goals and objectives. The suspected reasons for this membership exclusion might well be caused by an inefficiency of the linguistic vehicle impeding them and preventing them from negotiating their outcomes. The challenge taken up by this research is to investigate the effect of this particular impediment on the ASC and seek/propose a solution as a way of overcoming this problem of language use.

1.6 Significance of the study to the Algerian scientists

Algerian scientists play a key role in the development of the country. They are perceived as the main actors responsible for any change taking place in the society. Their contribution to the planned development of the country and their active participation on the international arena will help the country's system to run efficiently and effectively. However, these objectives are only attainable if the mechanisms of this plan are also efficient and effective. One of these mechanisms will be the provision and development of human and material resources. The other mechanism is the feedback neophytes receive from their mature members; the expertise and guidance needed to lead them to undergo the process of transformation from inexperience to maturity. If these new members are not

getting the feedback from their elder members, it will imply that learning during the stage of those neophytes' training is not passed on and, consequently, transformation is not taking place. Therefore, the community will remain static with no dynamism inside it and this will lead, in the long term, to its isolation from the IRC. In this case the country's development is impeded in this domain.

However, a tradition of exchange of information between members of the ASC together with a shared understanding and purpose within the community will have a positive effect on the new comers, and therefore a 'transformation process' (in Checkland and Scholes' terms; see chapter 4) will take place. In this case, the process will enable every neophyte (new member) to join the target community.

My hypothesis is that a scientific community which takes in information from the wider world, enables its circulation within the group and socialises its new members to work in the same way will be a powerful element within national development and a process of modernisation.

1.7 The Algerian Medical Community

Members of the medical community are key actors in national welfare and well-being. They treat patients and manage preventative schemes. They train the next generation of practitioners. They research into the reasons for disease and trial possible cures. Their key role at the heart of national life makes them a fitting study for this research. Moreover, they are a group where the language issue is particularly salient. They need Arabic or Berber with patients, French for teaching and administration and English to participate in the IRC.

Up to now all the constituent parts of this Algerian medical community have been relying heavily on accessing information through French. Arabic is not used for this purpose. If this medium has been adequate up to this point in time, it is certainly not sufficient to bring about the changes or transformation sought by every member as mentioned above.

This thesis argues that one of the means to bring change is to urge members from the Algerian Scientific Communities to read in English in order to learn the discourse of the

target community and establish common understanding by making communication possible. It is also believed that the learning of the relevant discourse is done by a constant exposure to its use. With the advances of technology more information and key articles are available on the internet and this is of great help in a country like Algeria where the stocks in the libraries have not been a priority. The necessity of English is underlined when accessing literature from this source since it is predominantly in English.

Henceforth, before discussing the type of discourse (which will be referred to as 'genre') in use by any specific community and before making any recommendations on useful ways to access it, some need arises to study the community itself. The model of discourse community (as viewed by Swales, 1990) is favoured here to help clarify the requirements for assigning an IRC membership and find out whether a shared purpose is really achieved among the members to be assigned such a membership.

Bearing in mind the time and money Algeria invested in the learning of the French language, and the existence of this latter along with Arabic for centuries, one wonders how painful the change to English might be for those who have taken many years to acquire French. It will seem wasteful to some that the resources that have been given to making sure that French could be used as a facilitator for Algerians should simply be wasted.

On the basis of this problem at the national level, this research focuses on the study of English language capacities in one scientific community in Algeria. At the same time it will be necessary to present and analyse the current language policy of the Algerian government and general attitudes among the Algerian people towards the various languages used in the educational system, with particular reference to English. We suspect that language issues have not been fully considered by all parts of the community.

1.8 The research Hypothesis

Throughout the informal interviews I carried out with some of the Algerian doctors, none of them ignored or dismissed the importance of the English language use in their subject. This has been illustrated by the following responses:

> On ne peut pas prétendre être un <u>universitaire</u>..., un hospitalo–universitaire sans <u>connaître l'anglais</u>... c'est impossible! (Dr13/MA/95)

After having used the French term "indispensable" several times in relation to the need for the use of English language skills in reading medical literature, one professor in medicine claimed:

> Les gens qui lisent en anglais pour s'informer, ce sont les gens qui <u>veulent connaître</u> davantage... Pour le niveau médiocre ou moyen, lire en français c'est acceptable... mais si tu veux atteindre un niveau supérieur, comme moi j'ai fait (he is Professor in Cardiology), là!... là tu es <u>obligé d'éplucher</u> parce que quand tu fais une thèse, tu veux arriver <u>à écrire</u>.... y' a des références...il faut utiliser des références... Un article où tu as à peu prés 20 références, sur ces 20 références plus de 15 sont en anglais... et plus l'article est <u>documenté</u> en <u>anglais</u> et plus il est <u>solide</u>!' (DR12/Prof/94)

The underlined words are the key terms that increased the researcher's interest in this area and led her to formulate the following hypothesis:

If the scientific community in Algeria is handicapped by the complex language situation in which it finds itself and in particular has difficulty participating in the international research community, doctors' inability to use English may thus affect their competence and efficiency. As a consequence, it may also affect the health of the population.

To begin to test this hypothesis it was necessary to pose two key questions:

- In which language does information enter the Algerian medical community? What are the media and modes of exchange?
- In which language does information circulate within the Algerian medical community? What are the media and modes of exchange?

These will be broken down into subquestions, which will include:

- Is medical literature written in English essential to the doctors' work?
- Can they get relevant and up-to-date information from sources in other languages?
- What languages do they use for discussion of new research published in English?

The research will then seek to ascertain how the subjects communicate their own work to the wider community;

- In which language do they contribute to research journals and participate in scientific conferences?
- Do they feel that they are blocked in any part of their work by the language medium that they have to use?

In general we will seek to establish the effect of needing to use English on the efficiency of the doctors' work.

1.9 Research design

Because of the complexity of the linguistic situation in Algeria, and because of the difficulty of getting the informants' perceptions of reality and views on the subject, therefore, this study has mainly adopted a qualitative approach to uncover reality with the hope "to understand people from their own frame of reference" (Taylor and Bogdan, 1984:13).

An ethnographic approach was judged suitable for this study of a community, especially since the group studied is small. Participant observation in formal as well as in informal settings, in-depth interviews and structured questionnaires are the methods used to find evidence to support or refute the theories in this investigation. The formal observation is a recording of an international conference called "Forum du JAM" which took place in Constantine, Eastern Algeria in 1993 (place of our investigation and among some members of the community under investigation).

1.10   Organisation of the study

This chapter is an introduction to the whole research and an attempt to present the argument of the thesis: English, the world lingua franca, is necessary for any Algerian scientific community that wishes to undergo transformation and gain international recognition. The Objectives and aims of the study, research question, research design and contribution of the study are also included in this section.

Chapter 2 is the review of literature pertinent to the conceptual framework. Various authorities suggest to us ways of looking at the world which are essential in defining a research problem. In other words, it helps us in our search for a suitable model for framing the community under study. A review of work done on circulation of information into and within groups is dealt with in this chapter as well as the hierarchies and characterisation of the type of relationships that could exist among the members of the group.

Then a clear exposition of the political context within which the study is taking place is fully discussed in chapter 3. Algeria's recent history has had an enormous impact on language attitudes, on contact with the wider world and available resources. The reason why the whole of this chapter has been devoted to a discussion of this Algerian language situation and its policy is because it is considered to be a key factor to the nature of the problem presented in this thesis.

The research methodology follows in chapter 4 to mainly explain the collection of the data and the research techniques used to carry on the investigation. Research analysis and findings are given in chapter 5. Chapter 6 covers the discussion of the research findings. The findings will show that the researcher's suspicions were correct and that language played a significant role in the difficulties experienced by some doctors in accessing knowledge relevant to their research, teaching and clinical work. However, as was to be expected, there were other variables that were also playing a role, in particular the general economic difficulties in the country which curtail resources, including access to knowledge (books/computers, etc.). Useful recommendations are made at this stage, in chapter 7, with a conclusion to the thesis.

1.11 Contribution of the study

The biggest contribution of this study will be evidence for the debate on foreign language learning in Algeria in particular and in all developing countries in general. This solution is only possible if one could bring an awareness to the Algerian power that change is of great necessity. This implies a new look at the policy of language that prevailed in Algeria since independence in 1962 and a thorough revision of language planning. The narrowly nationalist and religious motivations to remove French and introduce Arabic need to be

reviewed in the light of globalisation and the inexorable spread of English. It may well be that space should be made for the other languages of Algeria too (e.g. Berber) but that is outside the remit of this thesis.

CHAPTER 2

THE LITERATURE REVIEW, THE CONCEPTUAL FRAMEWORK, LANGUAGE, COMMUNITY AND THE NOTION OF CHANGE

To get the bad customs of a country changed and new ones, though better, introduced, it is necessary first to remove the prejudices of the people, enlighten their ignorance, and convince them that their interests will be promoted by the proposed changes; and this is not the work of a day.

Benjamin Franklin (1781)

2.1 Introduction

This chapter presents the theoretical basis of the research and the scholarship on which it is founded. This research will focus on the social role and importance of language to groups, communities and entire nations and the various uses they make of their language. Language fulfils several important functions in the life of a community in general and of an individual in particular. It is obvious that one of the main functions is to transmit information and thought from one individual to another. At the same time, the extent to which language affects the development of a society as a whole is sometimes not taken fully into account[1]. However, there is no community without communication and no communication without language (Wright, 2000). The argument here will be that when there is efficiency in communication (flow of information, understanding, etc), then there can be progress in social and scientific, economic as well as political affairs. This is true both for the individual and society as a whole. The interest here is to see how language can contribute to the development of a nation and help it to establish and maintain its position in the world. In a developing nation, the language that can fulfil this role may well be a lingua franca (as described in Chapter 1), usually a language of wider diffusion which is not native to the country.

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[1] This assertion stems from one of the main claims of the thesis that the language planning decisions in Algeria were motivated by political concerns rather than real communication practices and needs.

In the present chapter, the theoretical context starts with a look into the language-society relationship. The purpose is to show the reader the cruciality of their intertwining in real life as well as their mutual effect not only on the individual but on the society they live in. This section deals with both organic language development and planned change. The actual instances of the latter in the Algerian situation are dealt are dealt with at length in Chapter 3, which presents the context of the study.

The researcher investigates the concept of 'community' in its largest and most general sense to discover what light it might shed on the nature of any specific community under study. The notion of 'discourse community' is more extensively studied for its suitability as a model to the present research. One has to bear in mind, however, that any understanding of 'community' is only made possible by intruding into its interior. Therefore, the notion of 'social network' is another concept employed as a useful instrument for this research to help us describe the frequency and the type of relationship that could exist between individuals within a given community, between two communities, as well as the effect that might have on them. Although this term has been borrowed mainly from Milroy (1980), Scott (1991), etc., it is used differently. The definitions of its sense in this context are given later in this section.

In order to unfold the intricacies of the human network that could exist in a given community, one has to consider conceptual aspects such as 'interaction', 'status' and 'role'. It will be argued that the competence or know-how (*the savoir*) of interacting is achieved by identifying the individual's status as well as the type of activities s/he is expected to fulfil; his/her role. More importantly the role of the individual members of a given community is discussed with particular reference to their efficiency and effectiveness when operating on the international stage.

The dynamism of a community at a macro level is explained, generally and historically speaking, in terms of 'change'. Questions considering the 'what is change', 'why is change important' as well as the 'when, where and how of change are then introduced. The term 'transformation' is used to deal with the members' dynamism at a micro level bringing us to consider the crucial causes of change in a member of a given community. This notion of

transformation can be measured in terms of 'efficiency' and 'effectiveness', particularly borrowed from Checkland and Scholes (1990) with the aim of helping us explain the transformation process of an individual member of a community. This thesis puts forth the argument that the individual's mobility from a community of newly experienced members (neophytes) to a target group of experts, is only achieved if s/he efficiently and effectively participates in this community. The interaction requires an exchange of information on a national as well as on international arena. However, this is not always an easy task when the use of a second language is required to do so.

This discussion will focus mainly on language and community where language is the first language learnt. From this we shall extrapolate to apply certain concepts to the field of second language use, always recognising the differences between the two spheres.

2.2   Language and society

2.2.1 Some useful definitions

Before going into a consideration of this pair of concepts it is important to mention at this stage the different uses of words such as 'society', 'nation', and 'state'. The word society is to be used in contrast to individual to indicate the macro and micro levels of this study. Nation, nation-state, state, country could have been used as they indicate the macro-level of organisation which is meant here. However, these terms have precise political science definitions which we do not always want to employ. We therefore mostly use the more amorphous term **society**, but draw the readers' attention to these connotations:

- nation - a culturally and linguistically cohesive group
- state - a political entity with one or more nations
- country - the geographical location of the political entity
- society - a more general term for a group.

The last term implies some degree of communication among members of the group, although this could be in more than one language.

2.2.2 Approaches to the study of language and society

The way that scholars have treated the issue of language and society throughout history shows that there has been a tremendous change in approach. On the one hand, there are the linguists, following the Saussurean tradition, who used to refer to language as a system of communication but without reference to social concerns and, on the other hand, the sociologists and political scientists who studied groups and societies but who made little reference to language matters (particularly true of the Anglo-Saxon tradition).

The distinction that the linguist Ferdinand de Saussure (1857-1913) made was between a language's internal structure using the French word **LANGUE** and its external manifestation in speech using the word **PAROLE**. This situation lasted until the 1950s, a revolutionary time in which sociolinguists as Bernstein, Labov, Hymes, Gumperz and others brought the two issues of 'language' and 'society' together and many other disciplines in the social sciences were also included. They basically started analysing how both language structure and language use function in the real world. The term 'speech community' is used as a unit of analysis. The context of this real world communication is what has been referred to as the speech community. Ager's (1997) study on 'language, community and the state' is a good example of how this can be done, reminding us of the value of bringing linguists', sociologists' and political scientists' contribution to aid understanding the relationship of language with its society. Although limited to Europe and European languages, it is worth looking at Ager's approach, to some extent, as its aim is to define the interaction of languages with the political, social and economic context in which they are used.

2.2.3 The importance of Language

Throughout history, from a child's first words, language is used to meet wants and needs, to maintain social contact with others, to acquire knowledge about the world, and to exchange thought, feelings and information with other people. One school of thought has agreed on the overwhelming role that language plays in the development of society and the importance of the study of languages for sociology (Fishman, 1972; Ferguson, 1995). Aspects of language reveal and define social relationships, both with people actually

present or with those unseen to the speaker (their thoughts may be in written form instead of spoken). To Barber, for example, the role of language is prominent because

> Language is obviously one of the indispensable and universal components of the cultural system of all societies. As such, it should be a major focus of sociological concern (Barber 1982:3).

The argument on the prominence of language is also focused on the role of language as symbol and marker of identity and belonging mainly in multilingual and multicultural societies as stated by Eastman (1983) that "language is one of the cultural factors used by people in complex societies to identify themselves as different from others" (Eastman, 1983:45). Along the same line, Scotton, touching upon another aspect of sociological study, comes to this conclusion about language role in negotiating membership:

> Language, then, is figuratively one of the most visible means by which people are identified as members of groups and by which people negotiate for membership. Language externalizes statuses by offering an objective criterion for group identification; language is in some senses outside the individual. When a language is so used, it need not be a lingua franca, of course. Traditionally, language is the most important single criterion of origin, hence the term *mother tongue* (Scotton, 1980:67).

Tönnies (1955) considers language as being the 'organ of understanding'. It is not an invention of society but rather an expression of society itself. He describes it as such:

> Language has - as we all know- not been invented and, as it were, agreed upon as a means and tool by which one makes oneself understood. It is itself the living understanding both in its content and its form (Tonnies, 1955:54).

According to Romaine (1994) it is language that shapes the world we live in. In her words, she says that 'The world is not simply the way it is, but what we make of it through language'. Further on she explains how 'meaning is affected by our understanding of a situation' is because 'individuals bring different conceptual frames, background knowledge, and assumptions to an event or situation and arrive at an interpretation which is consistent with the alternatives available to them (Romaine, 1994:30)'.

2.2.4 The importance of society

Could society exist without language? Clearly not, since the organisation of complex human groups is founded on language. Only in very primitive relationships could other media, such as brute force, take over. However, this does not mean that those who study society have always taken the language question fully into account. It is difficult to illustrate a lack rather than a presence but any reading of sociological or political texts shows that language is often pushed to the background or not considered at all.

Language is demoted by being presented simply as a means. Hjelmslev (1961) remarks that it is in the nature of language to be a means rather than an end. Tonnies (1955) was among the first to realise the problematic nature of this and tried to give its function more credit by declaring that language is at least partially an end in itself. He states that: 'For traders and designing, ambitious persons even language becomes a tool used to attain ends, to deceive, to advertise, to exaggerate, to overcome sales resistance' (Tonnies, 1955::xvii).

Sankoff (1980) finds society the dominant partner in the language/society relationship. She refers to language as 'living in a social world' meaning that in her conviction language stems from the social world, rather than that the social world is constructed by language. If one takes into consideration the use of language in one particular context, one, can argue that it is the situation which creates the language rather than the other way around. To take just two examples - the rituals surrounding death in many religions and the power relationships between males and females - we can note that these give rise to forms of language which reflect these realities. However, the process is more accurately described as circular as we note below.

2.2.5 Language and society - equality and circularity

To other scholars the society- language relationship is equal and inextricable. This was highlighted by Chaika (1982) as such:

> Language and society are so intertwined that it is impossible to understand one without the other. There is no human society that does not depend upon, is not shaped by, and does not itself shape language (Chaika 1982:1).

More recently, Montgomery (1995) claims that language should not be thought of and considered as an addition to the social process in which it is manifested. According to him 'Society does not exist prior to and independent of language'.

With a similar view to Romaine (1994), Hassan also claims that language is 'the shaper of reality' for those who use it. Indeed, language cannot be just a reflection of some external 'objective' reality but the means by which we make sense of the world. She explains:

> the reason why language can be the means to so many ends is because the
> ends were created largely by language (Hassan 1996:14).

Language may also act as a symbol of an individual's place in society. It represents a resource providing access to particular activities and opportunities, and blocking access to others (Phillipson, 1992). This is a key point for our argument and we will return to it below.

Martin made the point that '.Language construes, is construed by and (over time) reconstrues social context' (Martin 1997:4). The idea that the relationship is part of a circular process, linking society and language in a cause and effect relationship which is constantly feeding back into itself, is very convincing

It is essential at this point to mention that Martin was not the first to recognise the importance of language in the construction of social reality. Scholars such as Whorf (1941) and Bernstein (1971), although challenged in some aspects of their work, can be identified as forming one of the major intellectual strands which laid the foundations for Hasan and Halliday's work and theory. One should bear in mind that even if the functions of language are universal, the way it is communicated in any one society to serve these functions has to be language specific (Saville-Troike, 1989).

2.3 National communities of communication

This section will deal with the link between language and community at the national level. Can we extrapolate from the examination of the intertwining of language and society at the individual and small group level to claim that language and national group are intertwined

in the same way? How does language help a nation achieve its aims? How does it frustrate a nation's purpose? In what way can we say that language is a resource for the nation as well as for the individual and a means for a nation to attain its ends? As we shall see below the focus of this work is an attempt to answer these questions through the study of a nation's scientific community.

In the nation state tradition there has been a search for the congruence of language community and state, which have become 'communities of communication' (Wright, 2000), in other words they are groups where communication is possible among all of the members. In some states there are diglossic arrangements (Ferguson, 1995) which permit the flow of information in a bilingual society.

Nationalism has arisen as a concept together with modernity. In Pre-modernity the political system was both feudal and static. Gellner (1983) divides this society into three classes: the soldier aristocracy, the literate clerisy and the productive classes (peasant farmers and artisan specialists). In such a society there is little mobility between classes and this has consequences for language and education. Firstly, it is not absolutely necessary for all classes to speak the same language as long as some of the members can provide bridges. Secondly, it is not necessary to have a general education system because in this stable setting individuals can learn their role alongside older members of the community.

With Modernity this situation evolves. The society is based on new technology and technical skills, which provoke social change in all domains. The society is no longer stable; it becomes a meritocracy which rewards dynamism and inventiveness. Education must now give a generic training which the individual can adapt later to a changing situation. General education teaches a set of skills and the methodology for learning. This is an expensive process and the only organisation capable of funding it is the state. As the nation state develops so does education in the national languages (Gellner 1983).

In the 18th and 19th centuries, Modernity and nationalism became key philosophies which moulded the societies of the European states. As markets developed, they were national. As scientific communities developed, they too tended to be national and to compete with

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those of neighbouring states. Defence was also national and competitive. All this contributed to an identification of language and state.

Linguistic nationalism is largely discredited now but Herder's view was very influential:

> only language has made men human .... Man is defined by his language capacity. What is more, language can be learnt only in a community. It is synonymous with thought' (Herder, cited by Breuilly, 1982: 105).

Because of this process, political elites in Europe have believed that it was necessary to achieve the congruence of nation and state. The French model is assimilatory. Planned from the centre a single unified language was imposed throughout the territory. Hartig (1980) pointed out that the

> centralisation of the language situation....the standardisation of one dominant language, results in efforts to assimilate minorities and simultaneously to eradicate their culture and linguistic identities (Hartig 1980:171).

The German model is exclusive and seeks to group in a single state all those who speak the same language (Wright 2000). Sometimes, language can simply grow organically; but in these circumstances it has been imposed through policies by external forces. However, in any case, whatever the motivation for a choice of a language in any society and whatever the planning process there is always a display of some 'acts of identity'; that is speakers of a given community 'choose the groups with whom they wish to identify' (Romaine, 1994:36).

In the period of decolonisation the newly liberated states adopted the same process as the European states in the century before. The choice of language by these states was most often tied to elements of nationalism. Sibayan and Gonzalez (1977) express this in the following way:

> For many newly emerged nations, it has become a matter of primary concern to frame an appropriate language policy which can materially assist in social and national integration and economic upliftment of their people,

keeping balance between internal needs and external necessities in a modern world (Sibayan and Gonzalez, 1977:35)

As a consequence of emergent nationalism and in the case of linguistically heterogeneous communities, states impose language policies to establish the supremacy of one language variety (usually that of the literate elite) as the language of the nation. 'Usually the more powerful groups in any society are able to force their language upon the less powerful' (Romaine, 1994:34).

This discussion of Modernity, Nationalism and Nation building has two consequences for our discussion Firstly, after the struggle to free themselves of the French the Algerians set about nation building. As we will see in Chapter 3, the Algerian political class were greatly influenced by the 19th century European model of nation building. Although they had fought against the French for the 130 years of colonisation, they nonetheless adopted much of the philosophy which underpinned French nation building (see language policy in chapter 3). Secondly, Modernity is fast becoming Post-Modernity as a new set of technological advances provokes further social change. The homogenous societies of the nation state era are disrupted as globalisation and audio-visual and computer technologies make the old boundaries irrelevant.

Before leaving this part of the literature review, we should make a comment about top-down language planning by central government authorities in contrast to bottom up development by market forces. The first approach is a conscious effort to build a cohesive nation; the second approach stems from individual choice and the social pressures of modernisation.

2.4 Community: Must a community have a language?

The institutions of the state are one of the domains in which citizens or subjects experience their participation in the state. There is no doubt that the institutions which shape our lives are very important. Della–Piana (1995) stresses the importance of the relational and communicational facets of institutions in solving the problems which face us today. Solving communication problems and negotiating exemplary institutions is just as

important as solving technical problems. Indeed, she confirms it by quoting Bellah *et al* (1995) as follows:

> It is tempting to think that the problems that we face today, from the homeless in our streets and poverty in the third world to ozone depletion and the green house effect, can be solved by technological or technical expertise alone. But even to begin to solve these daunting problems, let alone problems of meaninglessness in our personal lives, requires that we greatly improve our capacity to think about our institutions. We need to understand how much of our lives is lived in and through institutions, and how better institutions are essential if we are to lead better lives (Bellah, Madsen, Sullivan and Tipton, 1991:5).

This statement seems very powerful in that it links the scientific as well as the social, psychological and economic problems of the world to our lack of understanding of the institutions of our society. Della Piana's thesis is that we must evolve institutions as communities in order to understand them, improve them and profit from them fully. She indicates how we might start thinking about solving problems in order to improve our life. Her work suggests that one could start with the issue of language, as its power and importance have been made clear above.

Webster and Coulmas in the following quotations emphasise how language is essential to the human enterprise:

> If all my possessions were taken from me, I would choose to keep the ability to communicate because with it I would win back all the rest (Daniel Webster, cited in Romski and Sevick 1996: 7).

> The possession of a language implies a potential for unfolding individuals' range of action and hence their enrichment (Coulmas 1992:55).

These two quotations stress how language helps individuals attain their goals through negotiation and ultimately fulfil their potential. This is not only true of individuals but also of groups. States too need a language which permits their members to negotiate in the global community. We are presently witnessing increased economic competition and political co-operation which require individual states to be part of a world-wide network of communication (see chapter 1). Being able to put its case eloquently allows the state to maintain its position in the world or to negotiate to its advantage. However, in order to have

such a chance, the individual members who fulfil this role for the state need to know the 'rules' of this competition which might sometimes be in conflict with the ones they have experienced traditionally and nationally (see below). Progressing beyond national constraints allows the representatives of the state to defend and promote the national position in the world by actively and effectively participating in the international community.

The argument that seems to emerge from this section is that, in order to break down the barriers of the international community, members are not only required to choose the right code for negotiating but must also possess the skills to do so (Noor, 1996). The choice of the right code (the appropriate language as well as the appropriate register) is both a macro and a micro decision. The state decides which languages of wider diffusion it will employ in international contexts and also for education. The individual needs to master the registers, styles, codes appropriate to the task.

This leads us to the following questions: how can newcomers acquire the skills to participate in the international community? How can the experience of the established members be extended to the less experienced group? How could shared experience be established between members of the international community and neophytes?

This set of questions seems to indicate that in order to be assigned membership of the international community, the member has to gain the required experience for participation and should, at no moment, be excluded from the community mechanisms of intercommunication (see below for more clarifications of the meaning of mechanisms). However, the potential rule is that members of different status, holding different roles but sharing a common purpose must interact with each other. This will then allow the newcomers to profit from the information and, in their turn, generate more. Getting answers to the above questions as well as proving or testing the hypothesis, we have to look at the interior of the community we wish to study. To do this we have to investigate its members and their inter-relationships, in other words, its social network.

2.5 Community and the notion of social network

Having considered the macro level of human community in the section on state and language we come here to look at meso and micro levels. As human surrounding and social aggregates seem to be the essence of a community, then the meaning of community could itself be defined in terms of a network of social relations. First of all, and before dealing with the theory of 'social network' as such, this section will attempt to define the concept of community itself and in which context it is considered.

2.5.1. Definition of the concept 'community'

There has always been the problem of finding an adequate and agreed definition of the key concept of 'community' and many different suggestions have been made. Lyon (1987) wrote that by 1955 more than 100 separate definitions of community existed and even more were added. The reason for such difficulty and controversiality in describing this concept in modern society lies in the fact that the term is not only descriptive, but also normative and ideological. This can be noticed in popular usage of phrases such as 'sense of community' or 'community spirit' (Jary and Jary, 1995). There seems, however, to exist a common agreement in all descriptions of 'community' that they consist of humans who share a common purpose and who strongly demonstrate their participation and relationship to their fellow members (Bender, 1978).

Community is also one of the terms of social organisation that describe an existing set of relationships (Williams, 1983). It is very similar to Anderson's description of 'organisation' as a 'collective accomplishment of joint action within a bounded field of action in which individuals co–conspire in signifying activity to produce meaningful relationships' (Anderson 1992: 3-4). Here 'collective accomplishment' presupposes that there has been negotiation and agreement on a goal, both of which are language borne activities. 'Bounded field of action' shows that these activities are specific to a particular speech community whose members share purpose and experience. And together through negotiated action they build community (meaningful relationships). Members of any community should be socially committed to contribute to the common good and to the belief in the rights that guarantee individual security and happiness (Della–Piana, 1995).

This is probably one of the reasons that made Bender (1978) claim that a community is 'an experience rather than a place', in which case one cannot claim to belong to a community just by being physically in it. A community can exist without demanding that its members know each other or share physical space, it can simply be an 'imagined community' (see below). Apparently the thing that seems to form a community and give it more sense is its people and their bonding, mutual access to one another by sharing a consensus rather than being based upon rational calculation of self-interest as Bender puts it:

> A community involves a limited number of people in a somewhat restricted social space or network held together by shared understandings and a sense of obligation...... Individuals are bound together by affective or emotional ties rather than by a perception of individual self–interest. There is a 'we–ness' in a community; one is a member (Bender, 1978:7).

Although it still remains difficult to find a meaning for community in contemporary society, the idea of communication is still central to its concept. As mentioned earlier in this chapter, the role that community of communication plays is vital; meaning the type of community whose members can communicate but the means may be one or several.

Many social scientists will agree on the change or the new form that the concept of community has taken (Tonnies, 1955; Newman, 1981; Bender, 1978) because of the increased mobility of the population, the expansion of urban societies and modernisation. However, these social scientists will disagree to an extent on the nature of change that has taken place. This issue will be looked upon in more detail later on in this chapter. At this point, and from Bender's above quotation, a need has emerged to look at the social network theory as an attempt to explain the new concept of community.

2.5.2 Social network theory

As it seems to be a problem describing a community, the network theory comes here as a conceptual means to help its definition. Bender stated that: 'Community, which has taken many structural forms in the past, is best defined as a network of social relations marked by mutuality and emotional bonds' (Bender, 1978:7). The aim of this section is to use this theory to intrude

the community under study as well as find out the requirements, as far as social relations are concerned, for characterising this community.

The concept of social network has mainly been introduced and used by sociologists such as Homans (1950), Rapoport (1963) and later Granovetter (1973) and Freeman (1992), as a theoretical tool that would 'relate micro–level interaction to macro–level patterns...' It is highly mathematical and quantifies interaction and flows. For the present purposes of sociolinguistic investigation the general theory will be considered rather than the technical detail. In the research for this study, terms will be borrowed but the scale of the investigation will be smaller (see chapter on Methodology).

This theory has been successfully developed and generalised in the field of sociolinguistics (e.g. Milroy and Milroy (1992) and Scott (1991)). Milroy and Milroy referred to social networks as those informal and formal social relationships of which any human society is composed and which are distinguished by their own patterns of language use; this is how an individual relates to other individuals in a society, i.e. social networks imply bonds between one individual and another. Two aspects that Milroy (1980) introduced as measures of social networks are particularly important. The first is 'density'. When the members of an individual's network also know each other independently this is a 'high–density' network. A 'low–density' network, on the other hand, is where the only connection its members have is through one focal individual. The second is 'multiplexity' which refers to the number of transactional bases for social relationships among individuals. There may be one or many.

The organisational theorists, Katz and Kahn, contributed to the theory of social networks by their work on relationships. They considered strong and co-operative links as being 'close' relationships. According to Katz and Kahn (1978), these bonds are characterised by high trust and high exchange of information. They are most likely to occur when each participant profits from the exchange, and when each contributes equally to it. Another social theorist, Granovetter (1973), in his examination of the social function of weak network links, insists on the paradox that weak ties can be described as 'strong' in that they 'provide links to a community beyond the immediate social circle, information about education and employment opportunities.... and access to diverse ideas and perspectives' (cited in Cochran, 1990:289).

Krackhardt (1992) also thinks that Granovetter's proposition of 'weak ties' are more important than 'strong ties' in understanding certain network-based phenomena. Further on he explains that:

> His argument [Granovetter's] rests on the assumption that strong ties tend to bond similar people to each other, and these similar people tend to cluster together such that they are mutually connected. The information obtained through such a network tie is more likely to be redundant, and the network is therefore not a channel for innovation (Krackhardt, 1992:216).

Elsewhere, Saville-Troike (1989) refers to a typology of speech communities as 'soft-shelled' versus 'hard-shelled'; that is defining the strength of the boundary that is maintained by language. A 'hard-shelled' type of relationship is very similar to what Granovetter calls a 'strong' tie although Saville-Troike's use of these terms are specific to a speech community where language decides for any kind of interactional functions. She argues that:

> The 'hard-shelled' community has of course the stronger boundary, allowing minimal interaction between members and those outside, and providing maximum maintenance of language and culture (Saville-Troike, 1989:19).

The relevance of social network theories in this research is central. The permeability of the social networks of the Algerian medical fraternity studied is a key factor in determining how they interact with each other and with the outside world. It will be necessary to examine whether relationships are of an open character, are multiplex and whether they allow transmission of information into the group and feedback from it. In other words, and to comment on the above quotation, the argument is that if, for example, the Algerian's community network is of a 'hard-shelled' or 'strong' tie nature. It will be inward looking. There will be little or no chance to innovate, no impact of experts on newcomers and a risk for its members of being deprived of participation in the international community we referred to earlier in this chapter.

Having mentioned the similarity of description between community and organisation (see 2.5.1), therefore, it follows that 'network' has also become a fashionable term in describing the observed pattern of contemporary organisations. Nohria (1992) raises the issue by noting that

all organisations are in important respects social networks and need to be addressed and analysed as such. It has also become normative in advocating what organisations must become if they are to be competitive in today's business environment. Burt, for example, develops a more formal model in which he argues that:

> Social capital- an actor's relationship with other players- is as, if not more, important than the financial and human capital the actor brings to the competitive arena. This is because social relations are conduits for access to information and can generate information benefits (Burt, 1992; cited in Nohria and Eccles, 1992: :ix)

The importance of social relations to any social aggregates, either 'organisation' or 'community', is well captured in Burt's quotation. However, the following question needs to be asked here: How could these social relations become conduits for establishing an exchange of information? For business organisations one might answer this question in terms of 'negotiations'. However, for any other human communities it is essential to consider additional concepts such as 'interaction' 'status' and 'role'.

2.5.2.1 Interaction

The concept of 'interaction' is used in the literature and some distinction made between it and linguistic exchange (speech, writing), although arguably the two concepts are close. As Storer explains, interaction is mostly achieved through symbols (principally language). Equally relevant is the suggestion that an interaction is an exchange of information where there is a purpose, an outcome and an effect on people involved In Storer's words:

> Interaction is the purposeful, reciprocal influencing of two or more people by each other; it is generally carried out through the use of symbols rather than physical contact (Storer, 1973:24).

Through language, and at individual or group level, people interact with each other with the aim of achieving an aim when possible, in an efficient and effective way. In other words, the ability to use language is again present as a means to many ends (see above, Hassan's 1996).

At a societal level, language serves many functions and these are, according to Saville-Troike (1989), the creation or reinforcement of a boundary as well as the unification of its speakers as members of one single community excluding all outsiders. In her opinion:

> Interaction requires the perception, selection, and interpretation of salient features of the code used in actual communicative situations, integrating these with other cultural knowledge and skills, and implementing appropriate strategies for achieving communicative goals (Saville-Troike, 1989:22).

The above statement can further our understanding of the human network and its interaction. Individual members of a community could then engage in some sort of exchange with other fellow members considering they possess the linguistic and communicative skills as well as the strategies required for achieving their purpose during the interaction.

Hymes (1972) established a whole set of models of the interaction of language and social life in which he considers the description of a speech community on the basis of its social rather than the linguistic attributes. Through ethnographic work on actual types of participant relations, Hymes distinguished a set of components of speech known as the **SPEAKING** model. Each of these letters stands for a category used to describe any particular speech event in a given speech community. Particularly interesting are the letters **P** which stands for all 'participants' in the event and **E** for 'ends' or for purposes, which can be either 'goals' or 'outcomes'. According to Hymes, goals are the aims of the participants in the negotiation, while outcomes are the actual results obtained by that negotiation. A further distinction was made within this section between the purposes from the community's standpoint and those from an individual's point of view. As Hymes puts it:

> With respect both to outcomes and goals, the conventionally expected or ascribed must be distinguished from the purely situational or personal, and from the latent and unintended. The interactions of a particular speech event may determine its particular quality and whether or not the expected outcome is reached. The actual motives, or some portion of them, of participants may be quite varied (Hymes, 1972:661-62).

These categories are selected for their relevance to the present study. Before defining the role of any participants in any community it is vital to define, first of all, who these participants are

and, of equal- if not more- importance the nature of their purposes. These descriptions could represent key factors not only to the understanding of a community functioning and its network but also the quality of the outcomes it is expected to reach.

Such an exchange of information enables the individual to have rights in receiving something as well as duties to give something. However, it is known to everyone that different types of interaction occur depending on the situation the individual finds him/herself in. As Hymes (1972) said: 'It is clear... .that not frequency of interaction but rather definition of situations in which interaction occurs is decisive'.

But how does each individual know how to interact with the other? How would a new comer acquire all the mechanisms and skills dictated by a given community? In other words, what are his/her expectations? Would s/he know what are his/her rights and obligations when entering a new community? One could argue that answers to such questions and finding of resolutions to any conflicts within a community depend very much on the view of representing society, as a whole, and community, in particular, as dynamic or static.

According to Storer it is the individual's social position referred to as 'status' that 'serves to identify a bundle of rights and obligations that go together and can be associated with an individual in a particular situation' (Storer, 1973:26). In addition he adds: 'And those rights and obligations, within broad limits, pertain to anyone who is occupying the status, so that they are attached to a social position rather than to a specific individual' (Storer, 1973:.30).

Although 'status' is described as a rather static aspect of social behaviour and somewhat neglected in the methodological but for this study it actually turned out to be pivotal. It describes an individual's position in a society, in general, community and organisation, in particular rather than the type of activities s/he is expected to fulfil. In other words, one needs to know what is the dynamic aspect of his/her 'role' in relation to the status hierarchy.

2.5.2.2 Role

Any society or social organisation is described as consisting of people occupying roles. The concept 'role' might have been of some "value for understanding the functioning of society

(Coleman, 1974:13)" yet it has either been given vague definitions or no definitions at all as both reader's and writer's assumption is that there is a consensus on its meaning (Neiman and Hughes, 1951). Noor (1996) in her quest to help neophytes of the Malaysian scientific community negotiate their roles in the new ecology (the target community), cited Shakespeare's famous lines in 'As you Like it (Act II scene VII):

> All the world is a stage,
> And all the men and women merely players:
> They have their exits and their entrances;
> And one man in his time plays many parts,
> His acts being seven ages.

This view of acting is true to some extent as every man or woman has to play one's part on the stage. However, considering this stage, the type of relationship that should exist among players of different acts is vital to the success of this play. There must be a consensus about the exact role or about the criteria to be met before a new member is ascribed a role to play. One should also bear in mind that this stage has other players on the scene and if there is no consensus between them the play will be meaningless. As mentioned above concerning the social network, the relationship between the members is capital depending on each participant's purpose within a given context which is also referred to as "frame of reference". How could one possibly establish a balance between the role and the defence of his interest; in other words, how to be unselfish, treat all members of lower status equally. How to protect neophytes from those 'shock waves'[2] (in Thom's, 1975 terms) that will prevent them from crossing the boundaries of a specific community? Or how would they overcome any barriers that would separate them from other communities? How would they achieve their goals in entering their targeted communities.

In the context of this research the concepts of interaction, status and role are highly relevant. They will be key in discovering the dynamics of relationships in a hierarchical, role-bound society such as Algeria. The concept of role, in particular, is worth investigating because medical doctors are, generally speaking, acknowledged as players of a key role in the

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[2] Thom (1975) distinguishes first between two types of human societies "the military" and the "fluid" one. In the former, unlike the latter, the barrier is fixed and does not allow much flow or movement for an individual to experience in his behaviour. In the author's view the human societies are "stratified into social classes separated by shock waves that are difficult for an individual to cross" (Thom, 1975: 319).

development of the country and they are regarded as the main actors on the scene of the world (see chapter 1). In addition strong ties and hard shells may provide an explanation for the lack of exchange and information flows from the community to the world. It is argued that only a use of a world language within a given community would facilitate this exchange. Saville-Troike expresses in the following way

> Speech communities which primarily use one of the world languages are more likely to be 'soft shelled', because it will be known as a second language by many others, and interaction across the boundary will be relatively easy in both directions (Saville-Troike, 1989: 19).

The advantage of using a world language helps any community to reach its aims because interaction across the boundary will be a lot quicker and easier.

2.5.3   Conflict and Community

In the previous section, the importance of role as well the type of interaction between members of a given community has been highly stressed. However, in some cases, members with high expertise could act/ have the power to act as gate-keepers inside their community. In other words, they would not only avoid giving the neophytes the required training to become more experienced, but would also prevent them from getting a chance to enter the target community. This assumption is bringing another dimension of a potential problem to the present discussion and this is the idea of conflict in a given community.

Worsley (1987) shows how "community" has been used to denote a "network of interrelationship" and, in this usage, community relationships can be characterised by 'conflict' as well as by 'mutuality' and 'reciprocity'. This seems contradictory especially since elsewhere 'community' has had a positive connotation and never seems 'to be used unfavourably' (Williams, 1976).

The development and growth of any individual inside a given community is ensured only through his full participation in the differentiated roles and activities that characterise this one (i.e. community). Would this participation lead to his integration and, therefore, his membership to it? As a result of a relationship that is distinguished or marked by mutual

consensus and reciprocity mature members will affect new members; either socially, intellectually, or psychologically and, therefore, cause a certain change in them. In other words the neophytes will have to experience new roles with new rules in which they are expected to undergo a smooth absorption into the new environment and will, subsequently, turn them into more experienced individuals providing they accept the process of this transformation.[3]. This is highlighted by Hinde (1979) as follows:

> What transpires in each of our relationships depends not only on ourselves, but on the other participant. ... We not only contribute to the relationships in which we are involved, we are changed by them (Hinde, 1979:vi). (personal underlining).

However, conflict is bound to exist either because some of the society/community rules are unknown to the new members or because the type of change these members are experiencing is not accepted. Sometimes, the consequences of this conflict could lead to a negative experience; this change will then, in Kanter's (1985), opinion represent a 'threat' if it is imposed on the individual but, he argues, "...it is an opportunity if it is done by me. It's my chance to contribute and be recognised. That is the simple key to all of this: make it an opportunity for people and reward them for it" (Kanter, 1985:44). Part of this study is to find out about the roles and activities experienced by the Algerians in their transition from new into established members and whether this absorption into their new community is smooth, beneficial and absent from the 'shock waves' we referred to above.

Before being carried away with the multitude of questions that might arise at this stage such as the exact cause of this change, its nature and its effect on not only the individual but also on the whole community s/he belongs to, it is necessary to give more details on the kind of values an individual has to be aware of to be assigned membership. The importance of these values is to help a community to stay healthy and dynamic. It is worth looking at Della–Piana's (1995) study in which she gives the ideal common ground accepted by an ideal community. The following list of terms are to be referred to by the director or any staff members during times of controversy inside their specific community. These are shown below in table 2.1:

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[3]This concept is given a fuller account later on in this chapter. Its meaning in this context is about the positive influence or effect the mature members will have on the neonates. In other words, it is about their gaining of new and profitable experience from the formers.

Inclusive: A diverse community is inviting to all based on equity and appreciation of differences.

Responsible: A community places a high value on personal integrity and commitment.

Critical evaluation: A community recognizes that conflicts and problems exist and should be voiced and dealt with to benefit those concerned.

Open: A community fosters a habitat of diverse ideas and expressions.

Just: A community honors each person's ability to contribute and participate based on equity rather than hierarchy.

Celebrative: A community builds on past experiences and recognizes growth, leaning and service.

Purposeful: A community has a shared commitment to a common vision.

Consensus: A community accepts and respects all opinions and makes decisions by searching for common ground in an effort to reconcile all views.

Caring: A community provides active support and genuine acceptance, realizing we all have needs

Contemplative: A community takes time to observe connections between thoughts, beliefs, feelings and our own behaviors.

Table 2.1: "Some Words that Define Community"
Source: Della-Piana (1995:39)

It goes without saying that such behaviour will establish the mutuality and reciprocity mentioned above and aspired to by every human society, group or organisation. However, one might wonder to which extent such an ideal community could exist or to which extent its members respect these values. Very often, human nature errs. Sometimes we learn through errors but at other times these errors might affect the efficiency of the whole system of communication as well as break the bonds that could exist between members of a community. At this point, it is interesting to note that this could be one of the points where communities are worth investigating. In relation to the Algerian community under study, these words are highly significant. For mature members to help the neophytes reach their target community they have to achieve ideal behaviour, teach their juniors the sense of responsibility and critical evaluation and, at the same time, be open just, and purposeful.

As mentioned earlier, communities are very disparate and, therefore, in this research it will be necessary to categorise the types of communities that will be studied. Before looking at the particular cases in the Algerian situation it would be useful to consider the different types that exist.

2.6 The different types of communities

Basing herself on Fowler's (1991) work on 'the images of community', Della–Piana (1995) presented a brief description or image of different communities (see **table 2.2**).

Participatory Community This image of community based on the notion of the community as participatory democracy. It is at the heart of both the public and political, as well as the affective and altruistic. Decision making is decentralized and participation is said to be transformative; politics become a way of life. **Global Community:** This image of community has two distinct forms: (a) survivalist in nature and pessimistic in tone and (b) optimistic and see the global as a holistic system. **Community as Symbolic Construction or Imagined:** This image of community is based on the notion that communities only exist through boundary demarcations. They symbolically distinguished in terms of differences and similarities.	**Republican Community** This image of community is based on the idea of public community, one in which there is a life of shared virtue and history. **Religious Community:** This image of community is based on religious teachings and traditions of Christianity. **Community as a Spiritual Journey:** This image of community is based on the premise that open and honest communication leads to members rejoicing, mourning together, and delighting in each other.	**Roots of Community** This image of community is based on finding one's origin, usually in terms of traditions of a community or a generalized notion of a sense of family. **Existential Community:** This image of community is based on the notion that community is an ideal that is social at heart, worth striving for, but never achieved. **Community as Dialogue:** This image of community is based on common purpose created through dialogue with others that is authentic and satisfies the situation.

Table 2.2 Images of community
Source: Della–Piana, 1995

These images of community are symbolic and ideological. Although all of these communities are language dependent, there has been only one specific reference to those that are discourse created such as 'speech community', 'discourse community', etc. However, the idea of community of communication underlies them all. The fact of knowing that communities are mainly based on certain images which have the power to unify or split them could help us to understand how these communities have come to be formed in the first place and, as mentioned above, find out how language interacts in this

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process. Although a considerable amount of research has been developed during the last three or four decades to account for the use of language in the social context, there remains a lot to uncover. As Hymes (In Sankoff's foreword, 1980) pointed out: '…we are best equipped to look at languages as evolving isolates, most poorly equipped to look at languages as instruments of evolving populations.' The present research is meant to contribute on a small scale to its understanding.

2.6.1 Imagined community

Imagined community was a concept evolved by Anderson (1991). His argument is that a national group conceives of itself through its imagination. The individual members of the group will not meet all the others. The community is built through the written word, in particular the novel and the newspaper. With these cultural productions members of the community can experience the same reactions, emotions, and know that they are doing so together with their fellow citizens. This is a recognition of shared experience mediated through language. Another way in which this community is built is in the journeys of teachers, administrators, students within the boundaries of the state to certain national institutions. This is a recognition of geographical space common to the group.

Having already mentioned that in contemporary society a new form of community has taken place. A new concept known as 'Interest Community' has been developed and explored by Webber (1970) in which he suggests that the traditional sense of community based on the physical grouping of people with a similarity of background and/or ethnicity has changed into a community of people sharing the same interests but not necessarily the same geographical space. Newman comments on such a concept as such:

> In the case of professionals like himself, the members of his interest community are often separated by hundreds, if not thousands, of miles. They communicate via journals, letters, and telephone calls and come together for face-to-face contact as infrequently as once a year at national or even international symposia (Newman, 1981:11).

Newman is against this dislocation and argues that it works against racial and economic integration in the society individuals live in. According to him, only a physical propinquity

is the answer to the problems faced today by the modernisation and he calls it 'Community of Interest' instead of 'Interest Community'.

Webber's concept seems to be an interesting one for the purpose of this study. More recently, another concept similar to Webber's interest community has become quite popular. It is known as 'Discourse Community'. This notion will be given more attention in our next section of this chapter.

2.6.2 The speech community:

In terms of sizes, 'community', as it has already been mentioned, is characterised as the 'micro-cosmic' representation of the larger society (Bender, 1978). The most established notion of a language related community in the tradition of social sciences is "speech community". Although this term has been used a number of times earlier on in this chapter it has not been fully defined as a concept. Several definitions of speech community are proposed, most of them are slightly different from the next (see Hudson 1980:25–30). According to Gumperz (1972:16) it is made up of people who 'share the rules of interpretation and usage of at least one language' or language variety (Hymes, 1972:54). To other scholars it could mean 'shared linguistic rules' (Bloomfield, 1933), 'shared norms' (Labov, 1972), 'shared regularities of use' (Fishman, 1972), 'shared sociocultural understandings and presuppositions with regard to speech' (Sherzer, 1975). Yet Saville–Troike (1989) finds it helpful to "distinguish between participating in a speech community and being a member of it; speaking the same language is sufficient (yet not necessary) for some degree of participation, but membership cannot be based on knowledge and skills alone" (Saville-Troike, 1989:17).

Further on Saville-Troike adds an interesting component to the description of this concept which is about the 'overlapping' of speech communities. In her view people can be, and normally are, members of several speech communities at the same time. People alter their norms for speech behaviour to conform to the appropriate speech community, by adding, subtracting, and substituting rules of communicative behaviour. Previously, a similar idea was proposed by Bolinger (1975) in which he holds the view about the existence of several speech communities. According to him, individuals' purposes determine the type of speech

community they identify themselves with. This alteration of members between different speech communities presents itself as a solution one has to look at in case of conflict (see section 3.4.3 above). So it becomes possible to adapt oneself to the new environment (the new targeted community) by adapting the rules of this latter to one's purposes. Would these rules still be useful after being altered? Would the mechanisms for the intercommunication between the members be efficient and guarantee the renewal of the community? All of these different views concerning the speech community definitions are useful but too static. We need to look at another related community from a more dynamic level such as the notion of "discourse community".

2.6.3 The notion of Discourse Community

Once again and in terms of sizes, Swales (1987b) categorises discourse community (hereafter, DC) as the neonate example of its elder kin speech community. Discourse community is another concept that leads itself to many interpretations or definitions. It is a type of speech community but where the term 'discourse' implies a use of language for a purpose/a goal. Further on Swales (1990:24) distinguishes between the two concepts of speech community and discourse community by giving a set of descriptions to the one and to the other. According to him, the former is a socio-linguistic grouping whose primary determinants are mainly social, and it is centripetal as it tends to absorb people into the general fabric of society. However, the latter is a sociorhetorical one whose primary determinants of linguistic behaviour are functional and purposive, it is also said to be centrifugal as it tends to separate people into occupational or speciality–interest groups.

To Bennett Rafoth (1990)

> It is an idea of language as a basis for sharing or holding in common: shared expectations, shared participation, commonly (for communally) held ways of expression............it compels one to consider the broader social and political implications of language's role in conformity and diversity, participation and exclusion (Rafoth 1990:140).

The above quotation shows the power or importance of language in a community on a much larger scope; language is described as a useful mechanism for participation or

exclusion from a community. Herzberg (1986) gives a more limited and clearer description of DC. As quoted in Swales's (1990), he defines the term 'discourse community' as follows:

> Use of the term 'discourse community' testifies to the increasingly common assumption that discourse operates within conventions defined by communities, be they academic disciplines or social groups. The pedagogies associated with writing across the curriculum and academic English now use the notion of 'discourse communities' to signify a cluster of ideas: that language use in a group is a form of social behaviour, that discourse is a means of maintaining and extending the group's knowledge and of initiating new members into the group, and that discourse is epistemic or constitutive of the group's knowledge (Herzberg 1986:1).

Clearly, this model of DC is going to be favoured in our study. Firstly, it explains that there are rules related to the use of language which should be known by all members. Secondly, it gives precision on the exact grouping that constitutes this particular community; its being of an academic nature. Thirdly, it specifies the kind of dynamism inside it ensuring that expertise is passed on to the new comers for their passage. These requirements fit with not only our subjects but also respond to the frame we discussed above.

The notion of DC was then made more explicit by Swales (1990) and later by Johns (1990) and Roe (1992), who see it as a group of people, such as academic groupings of different kinds, having in common an 'acknowledged raison d'être' (Roe, 1992), although they might differ in their individual roles and objectives. A discourse community, as stated by Swales (1990), is recognised by the specific genres its members employ and means of intercommunication including both speech events and written text–types. Thus, in order to enter an academic discipline a student must learn the genres and conventions that that are commonly employed by members of the disciplinary discourse community as argued by Bizzell (1982).

More interestingly are the six criteria provided by Swales to characterise this discourse community and these are:

    1. A broadly agreed set of common public goals.

    2. Mechanisms of intercommunication among its members.

    3. Information exchange to achieve the goals and feedback.

4. Utilises and hence possesses genres in the communicative furtherance of its aims.

5. Has specific lexis.

6. A level of expertise.

Purpose, the first criterion of a DC, is very powerful in that it characterises it as dynamic, a notion absent from the notion of speech community. Swales develops these criteria (2,3, and 4) on the idea that a particular discourse community owns mechanisms that should function efficiently among the community members, and these are identified by the genres which in turn mediate the in–flow of information and act as a communicative vehicle for the achievement of the goal.

It is thanks to criteria 5 that a member of a given community is distinguished from a non–member. It is absolutely obvious that what distinguishes one scientific community from the other is its lexis. As for the final criterion, it is very critical to the description of a DC. Lack of expertise excludes individuals who have aspirations to be part of discourse community and who are disadvantaged in societal terms by not achieving threshold levels of competence. Earlier on, Swales (1987b) has already introduced the notion of DC and draw some conclusions. He has also anticipated some of the consequences due to lack of knowledge and expertise. He says:

> Sketching the boundaries of discourse communities in ways that I have attempted implies (a) that individuals may belong to several discourse communities and b) that individuals will vary in the number of DCs they belong to and hence in the number of genres they command. At one extreme there may be a sense of DC deprivation (Swales, 1987b:7).

The implication made by Swales whereby he points out that members could join more than one community is also noticed above from Saville-Troike and Bolinger.

Later on, Swales (1998) reconsidered the concept of DC on the basis of other researchers' definitions. Among them, Eckert and McConnell-Ginet (1992:464) who referred to the term as "community of practice", quoted by Swales (1998: 202) as follows:

A community of practice is an aggregate of people who come together around mutual engagement in an endeavor. Ways of doing things, ways of talking, beliefs, values, power relations-in short, practices-emerge in the course of this mutual endeavor. As a social construct, a community of practice is different from the traditional community, primarily because it is defined simultaneously by its membership and by the practice in which that membership engages.

He then quoted Hanks (1996) who sees community as a dynamic entity comparing to the traditional speech community and:

It also shifts the ground of definition from either language or social structure per se to the engagement of actors in some project.... Because some endeavors last longer than others, communities so defined clearly have different durations and arise under different circumstances. And because we all engage in multiple group endeavors at any time and throughout our social lives, we are members of multiple communities, simultaneously and over time. (Hanks, 1996:221; quoted in Swales, 1998:202)

According to Swales (1998:202), these definitions, although interesting, create some confusion linked with the multiplicity of such endeavours. He declares that "Human beings are not chameleons". As a matter of fact, this remark has, to some extent, reflections on our ASC. Members of the Algerian medical community might participate in their potential "community of practice" as defined above but the type and degree of endeavors they will engage in will be limited or constrained. It is clear now that an existence of a DC involves a sharing of a purpose and a use of a specific language 'genre' by its members to negotiate their goals on the basis of the purpose they have set as mentioned above.

"Genre" used to define discourse communities

It should be pointed at this stage that a look at the concept of genre in the present study is mainly for an illustration of the Algerian medical members' command of the genres they require to fulfil their purposes at either their clinical practice, teaching of medicine or own academic research. But it is not a genre analysis.

Swales, as a discourse analyst and applied linguist, has devoted most of his time (and still does) to a substantial and detailed research on "genre analysis". His reason for doing so is because: "Genre analysis thus adds to our understanding of how language is used within an

important discourse community, ... it draws on linguistic and sociolinguistic theory to clarify the nature of language use and language learning in an educational setting (Swales, 1990: vii)

The definitions he gives to genre in his 1990 book are an expansion of those he gave in his earlier publications, from the period 1985. He particularly emphasises the idea that a genre is a recognised communicative event with a shared public purpose and with aims mutually understood by the participants within that event. Swales' most relevant definition used to help us understand discourse communities is as follows:

> One of the characteristics that established members of these discourse communities possess is familiarity with the particular genres that are used in the communicative furtherance of those sets of goals. In consequence, genres are the properties of discourse communities; that is to say, genres belong to discourse communities, not to individuals, other kinds of grouping or to wider speech communities. (Swales, 1990:9).

Following the importance given to genre for ensuring an efficient functioning of the community, one wonders what would the situation be if the aim of the DC is not fully understood or if the new members are not in total command of the genres? Here, as well, the command of a language will play a crucial role in that it is the first step towards command of the genre. As stated in chapter 1, some challenging medical genres (more specialised) are only available in English language. The assumption is that if these Algerian members do not command this language they will not be able to command that genre and, therefore, will be barred from the target community. English mother tongue speakers do not have this first impediment. It will be argued in the following sections that in order to avoid this exclusion members have to adapt to the milieu by accepting the change. Here we come to interpret the notion of 'change' according to its relevance to this research.

2.7 Community and the notion of Change

Although Swales' model can somehow be applied to the research community under investigation, one has, however, to mention that it fails to take into account the

environmental constraints that could affect greatly the doctors' efficiency in their work as well as ignoring the whole social network the individual lives in.

In the same way as Swales's model, this research considers the Checkland's 'Soft System Methodology' (SSM) and its application to the medical doctors' community. Both Checkland and Scholes agree on the fact that a formulation of root definitions to any organisational problem is made by consciously considering the elements that make the word 'Catwoe', these are:

C 'customers': the victims or beneficiaries of T
A 'actors': those who would do T
T 'transformation process': the conversion of input to output
W 'weltanschauung': the world view which makes this T meaningful in context
O 'owners': those who would stop T
E 'environmental constraints': elements outside the system which it takes as given

Figure 2.1: The Catwoe Mnemon
source: Checkland and Scholes (1990:35)

According to Checkland and Scholes (1990), any transformation taking place in a given context– that shows any conversion from input to output– will be judged successful or unsuccessful on the basis of three different counts or criteria as named in SSM the **'3es':**

(i)**Efficacy** (for 'does the means work?') The techniques used to help us clarify this aspect of study are observation and interviews.

(ii) **Efficiency** (for 'amount of output divided by amount of resources used')

(iii) **Effectiveness** (for 'is T (the transformation) meeting the longer term aim?')

Checkland and Scholes (1990:17) declared that 'The best engineer is the one who provides with a minimum of resources a solution which both works and is aesthetically pleasing (personal emphasis).

A quest for such a solution is absolutely fundamental for third world countries like Algeria whose ideal is to achieve more with less spending (less financial cost) as experience is gained. But the inevitable question to ask is 'How to do it?' This study attempted to look at the functioning of a system in any organisation, compare it to a potential community, investigate its networking within the given community; pay a particular interest to the individuals' roles and status in order to find out about the established relationship (see chapter 6 for full discussion).

With Checkland and Scholes' model, the environmental constraints are considered as well as the transformation process that might occur to the new member or 'neophyte' to develop and achieve his purpose; that is to join the target community.

Although the notion of change has been raised throughout this chapter, its conceptual definition is still unclear. The aim of this section is then to explain what we mean by 'change' with an attempt to show the reader the importance of such a concept in the context of this study as well as its use as a methodological instrument to reach the objective of the present research.

So far, the argument put forth is that in any social network, innovation is seen as an advantage for maintaining the dynamics of a given community thanks to open and soft-shelled relations. This dynamism, in the aspect of technical professions like medicine, biology, etc. is observed by making the link between the individual's productivity and the number of professional ties he refers to outside his own speciality. For example, this could apply to doctors specialised in cardiology but will touch upon neurology, internal medicine, etc.. If there is a purpose in an exchange between members of the same- or different- community, if there is an influence then there must be 'change'. But what is the definition of change? Why is change required within a community?

The issue of globalisation in the present world has already been raised earlier. It goes without saying how prestigious and important to every member of any community to belong to the international arena. However, the membership is assigned under certain rules and conditions which one has to abide (see above). Therefore, one has to change

accordingly. Considering some of these latter theories in the following section is going to broaden our view about this concept.

2.7.1 Change Theories in the context of community

Indeed the concept of change has been brought to the world of sociology a long time ago. To trace back its history, one has to mention, more importantly, Main's (1861) 'Ancient Law' whereby he distinguishes between two types of societies, one based on 'status' and the other based on 'contracts'. He argues that 'the movement of the progressive societies has been a movement from status to contract'. Greatly influenced by Main's dichotomy of society, Tonnies (1955) came with another dichotomy known as 'Gemeinschaft' meaning 'community' and 'Gesellschaft' meaning 'society'. According to him, when Gemeinschaft is characterised by intimate, private and exclusive living together (cases of family, kinship, friendship networks, etc.), Gesellschaft is an artificial construction of an aggregate of human beings, characterised by competition and impersonality'.

In other contexts of studies on cause of change one ought to go back to Deutsch's (1961) article written on 'Social mobilization and political development'. in which he defines:

> Social mobilization is a name given to an overall process of change, which
> happens to substantial parts of the population in countries which are moving
> from traditional to modern ways of life (Deutsch, 1961:493)

Is this change, caused by social mobilisation, seen as positive or negative process? Is it going to be beneficial for humanity? Or is it going to destroy this sense of community as noted above? (compare with Bender, 1978). The answer to these questions will depend on the meaning and use of social mobilisation. Foltz (1981) argues that Deutsch's model of social mobilisation could be very practical and important for analysing modernisation and political development of a nation-building in that '.... It introduces human action and reaction into a broad historical process; in effect, it brings the vast changes adumbrated by Durkheim, Tonnies, Marx, and Weber down to the level of discernible actions which can be studied and measured' (Foltz, 1981: 26). Further on he adds:

> The consequences of modernisation are seen as quantitative and eventually
> qualitative changes in attitudes, needs, and actions of real persons; these

changes in turn permit, and perhaps compel, other changes in the social and economic realms. As people change they also affect the political realm directly, by generating demands for government to satisfy, and indirectly, by producing new social structures which both generate demands and create new resources on which national governments can draw (Foltz,1981:26).

This is a positive representation of change that will result in influence and dynamism within the community. This holds true within an academic arena as well. Although the main purpose of its members 'is not power, as it is for politicians, or wealth, as it is for businessmen, but reputation' as stated by Becher (1989:52). 'Modernisation' in this context would mean modern or up to date resources and a more flexible attitude towards the use of the new ways needed to facilitate the achievement of the community's purpose which is the earning of professional recognition. Belonging to the IRC means owning the required skills to communicate, negotiating outcomes, diffusing information and, finally, disseminating knowledge, as argued by Becher (1989:53) '...credit is earned through the publication of one's research findings'. Therefore, one can say that eminence is gained once intellectual work is made public. This is making oneself visible in the invisible college. By doing that, this community is certainly going to be world wide known. This change will affect the whole country which in turn will urge or develop new ways to make the community's reputation more satisfactory and, therefore more effective and efficacious. Becher's biologist informant was then right to remark: 'It's a cumulative process. Once you earn a name for yourself, it acts as a magnet: you get invitations to join societies, give papers and take up offices (Becher, 1989:58).' How would a member of an academic community reach this stage of eminence? Is publication an easy process for any of these members? If it is difficult, what the impediments and what proportion are language related?

While Newman (1981) sees the new form of community as a threaten to individual's security and integration in the society, Tonnies thinks, on the contrary, that individuals should be helped to feel as part of the new community (through modernisation and mobility). The argument is that any new comer in any type of community should gain the required experience by accepting the innovation and possessing the linguistic vehicle in order to communicate, these, in turn, will be his passport to access the new world.

2.7.2 Dynamics in the social system

The argument that seems to emerge from the above sections of this chapter is: because of global competition, members of any community aspire to belong or hold a decent place in an international one. Members of a potential community would influence each other by introducing or creating a new idea and therefore causing change inside this community. This process is particularly possible in an open and soft-shelled network. However, in order to understand the how of change one has to look and understand the whole system we live in.

It is difficult to give a clear definition of 'system'. Particularly relevant are these three definitions provided by Webster's Dictionary (1961);

- A complex unity formed of many often diverse parts subject to a common purpose.
- An aggregation or assemblage of objects joined in regular interaction or interdependence: a set of units combined by nature or art to form an integral, organic, or organized whole: an orderly working totality: a coherent unification...
- A group of devices or artificial objects forming a network or used for a common purpose...

These definitions are helpful in that they explain the complexity of the system a given community lives in; to understand its existence; its purpose... and finally its objective in this world. However, at this stage, one has to note that this type of system is static rather than dynamic. So that a system is said to be dynamic one has to understand what dynamic is in the first place. The definition given to 'dynamic' by Hart (1964) is interesting and relevant to the present research:

> 'Dynamic' used in this context means that the system receives inputs of various kinds, which are acted upon according to the nature of the system to produce outputs which may in turn become inputs into some other system (Hart, 1964:11).

From the list of characteristics given by Hart (1964) the following we could refer to in this study are selected:

- A system is constantly receiving additions to its population and, at the same time, losing some.

- To continue to exist, a system must be constantly adjusting to its changing environment.
- No dynamic system concerned with human activity exists without an objective.

Equally relevant are some of the following statements about human systems made by the same author:

. Those who design and construct the rules for the behaviour of a system must express the objective of the system clearly. The reaction of the system to its input and its adjustment to environmental changes should be defined in the objectives.

. Basically, a system should be designed so that it is self-controlled in operation. However, as a system never exists in isolation, there must exist external controls which may on occasion over-rule the internal operating rules.

Following these descriptions or discussions concerning the 'dynamic-system' relationship one could conclude that communities are groups of individuals linked in a systematic manner. The cause of this formation is mainly their shared purpose. The system is composed of sub-systems, therefore, if one considers the mathematical conception 'the whole is the sum of the parts', the success or failure of this whole depends on its parts. According to Hart this argument does not hold true because the whole image of a sub-system in a group cannot be understood by simply adding its parts and indeed, 'As soon as a group comes into existence it creates its own objective. It is not the objective of individual A plus the objective of individual B. It is something different: something related to the quality of 'wholeness' and unity (p.16).' This quotation is very powerful and relevant to the context of the ASC; The members and mainly the Gate keepers ought to bear this in mind and understand that only co-operation would help their community achieve an international recognition. This co-operation will involve the members in exchanging information as well as providing feedback to each other.

Diffusion and innovation are here two other key concepts to the present research considering that an inside of a community with its networking is our question in here. Opening the 'pandora's box' requires from us to understand how the diffusion of innovations is made between the concerned members; what the mechanisms are and their efficiency in diffusing these innovations.

Diffusion scholars are the ones who represent the 'invisible college' which is defined as an informal network of researchers who form around an intellectual paradigm to study a common topic (Kuhn, 1970; Crane, 1972).

Role is only meaningful and significant if it linked to other roles within the system. What is more important in ensuring a role in this web or society or community is communication/discourse. Unless the discourse of this community is understood, members will not be able to converse with each other, negotiate or reach an agreement. This is on one hand. On the other hand, even if the discourse of the community is understood, a lack of negotiating skills will result into a breaking of this communication. In which case the whole system might still function but much less efficiently.

But where do our worries lie that make us think the system will break? Which element in this system might potentially impede the members to join in the crucial communication. As far as the Algerian scientific community in general, and the doctors, community under study, in particular, are concerned the problem is first and foremost a linguistic one. International recognition, as described above, is accessible to them only through use of non-native language. They will need to have recourse to a non-indigenous code (Omar, 1996) in order to be able to establish status, possess a role and interact with their fellow members. The significance and effect of an exchange of information between experts, well experienced members of the community and the neophytes, the newcomers, less experienced ones is then very relevant and valuable for the survival of the national community. As mentioned, the transformation is a process by which experts ensure the acquisition of the required expertise by the new ones. It is their role to direct, inform, reform and/or transform not only the institution of their community but also the members that will replace them in the future. It is necessary at this stage to recall Bellah's, et al, (1991) concern about improving the institution we live in.

Ackoff and Emery (1972) conclude wisely that 'Resolving a complex *issue* produces a macro change in a society, an organisation, or even in the life of an individual. Resolutions do not solve issues but transform situations radically so as to *dissolve* problems or render them solvable' (Ackoff and Emery, 1972 cited in Mc Whinney, 1997:18). However, the issue to be resolved has to be identified in the first place.

This is what we shall now do by giving an analysis of the national situation with regard to language. An understanding of policies and the historical reasons for them will allow us to situate the doctors' position more clearly and understand the national rather than the global dimension of their problems.

CHAPTER 3

BACKGROUND TO THE LANGUAGE SITUATION IN ALGERIA AND THE POLICY OF ARABISATION

Any policy for language, especially in the system of education, has to take account of the attitude of those likely to be affected. In the long run, no policy will succeed which does not do one of three things: conform to the expressed attitudes of those involved; persuade those who express negative attitudes about the rightness of the policy; or seek to remove the causes of the disagreement. In any case, knowledge about attitudes is fundamental to the formulation of a policy as well as to success in its implementation (Lewis, 1981, quoted in Saada, 1992:1).

3.1 Introduction

The language situation in the Maghreb, Algeria, Morocco and Tunisia, is rather complex. Such a state of affairs stemmed from the conditions of historical development prevailing in those countries and, especially, from the policy pursued by the colonial powers which caused the language of the colonisers to be adopted by the new elite and was progressively spread across the population with the relative generalisation of (French) education at schools. As a result the local languages experienced a stagnation and played simply the role of colloquial (indigenous) languages (Redjala, 1970), French being the language of all types of oral or written expression in the administration and education and Arabic being used at home and within the native population. Therefore, in the countries of the Maghreb the situation is multilingual with a presence of three main languages: Arabic, French, and the mother tongue (dialectal Arabic or Berber) reflected through three main cultures linked to the use of these languages.

Before the French invasion, Algeria's official language was Arabic. The French colonisation which lasted one hundred and thirty years established French as the official language and medium of instruction for many decades, including the immediate post–independence period, that is beyond 1962. The French language remained predominant simply because the whole education system was entirely in the hands of French educated teachers and it was impossible to replace French by Arabic in such a short time.

This chapter will seek to explain the language environment in which the research was carried out. It will cover aspects not strictly related to the research to show the full intricacy of the situation, and to show that when the Algerian government decided to intervene, it did so very strenuously and with some authoritarianism. This we will show contrast vividly with the laissez-faire we have witnessed in the English language education of doctors.

The chief influence on the choice language of state comes from the decolonisation process. The Franco-Algerian war 1954-1962 was a period of brutality and extreme violence involving both sides of the conflict. Independence was only won after much bloodshed and suffering that had a profound effect on attitudes within Algeria towards France. French was the language of a dominating power that had only granted independence after being forced to do so. This is in direct contrast with other former colonies where independence was granted through negotiation. Thus the administration in 1962 was bound to harbour negative feelings towards French and to view Arabic as the language of independence and identity in the new state.

However, of course, French had been the language in education, administration, economy, and it became difficult to eradicate it from Algerian society at large. French remaining the dominant form of expression led to opposition from various political tendencies and a desire to replace it by Arabic. Moreover, Algeria being a Muslim country the tendency to remove French was assimilated to another form of liberation from the coloniser, the main argument being that political independence has no meaning without a cultural independence which was equated with the Arabic language. The Algerian regime was constantly reminded and pushed to replace French by Arabic as soon as possible. In this respect, a cultural revolution emerged in 1971 to give stronger support to the Arabic language which became the first language and French became second (Taleb–Ibrahimi, 1973). In other words Arabic was instrumental in the nation building process in Algeria.

The respective place and role of both Arabic and French was from that date onwards a permanent conflict within the political regime, in education and on the labour market. Arabic was clearly dominant in primary and secondary education while the university was

still using French in most departments. The labour market favoured the French at the expense of the Arabic graduates simply because the working language used in factories and most administration was French. As for the state and government civil servants, Arabic was used as a rhetoric to express Algeria's liberation form France. For example, up to the present time the number of French educated ministers is higher than the number of the Arabic educated ones, and this has been the main feature of all governments since independence in 1962 until now. This is why, also, the debate about the total removal of French in Algeria has never ceased since independence until now. French is still a sensitive issue with serious ideological and political implications instead of being a complementary education medium alongside Arabic as used in Morocco or Tunisia for example.

The political tendency in favour of Arabic uses the single national language as a means of nation-building in Algeria because the nation is composed of different ethnic groups with different languages and dialects. The language was to be a symbol of national unity as well the glue of social cohesion (see chapter 2). This has not been an easy move since Arabic dialects are not the only languages spoken by the autochthonous population in Algeria. Berber (also known as 'Tamazight' or 'Amazighe language') is used by a large proportion of the population. Berber has been explicitly rejected as an official language on the basis that this would result in dividing and opposing the Algerian unity based on the Arabic language and the Islam religion. As a result the Berbers (in Greater Kabylia and Algiers) have perceived this decision as degrading to their language and culture and have organised mass demonstrations and strikes during the 1980s and 1990s to express their opposition to the political regime. But, despite these conflicts, Arabic has remained the only official language and medium of instruction at the present time.

The French language, however, has constantly been the main target of particular groups, firstly from within the single-party system under the FLN between 1962 and 1989, and later from leaders whose ideology is based on religion. These groups have never given up their determination to remove French from Algerian public life. They have succeeded in voting a law that imposes monetary penalties and even imprisonment against any Algerian who uses French in television, radio, in administration or in education instead of Arabic. The

influence of the same groups has gone a step further through the introduction of English during the early 1990s as a first and compulsory foreign language instead of French.

In the Algerian education system, English which was only introduced at the seventh year of schooling, has always been considered as a foreign language rather than as a medium of instruction. For the academic year 1992–93, the Algerian government decided to implement the teaching of English language at the primary school, alternatively with French. The argument held by Ahmed Djebbar, a former minister of education, in the Algerian daily newspaper *El Watan* (20–9–93) was:

> L'introduction de l'anglais en quatrième année de l'enseignement fondamental n'a pas été décidée pour le plaisir d'expérimenter quelque chose de nouveau. Cette mesure, qui n'est qu'un aspect de la redynamisation de l'enseignement des langues étrangères dans nos établissements scolaires, nous avons décidé de l'appliquer avec prudence, en tenant compte à la fois des vœux des parents que nous avons interrogés et des moyens dont nous disposons..... tester une mesure et évaluer ses résultats, avant de décider de son extension, de son abandon ou des éventuels aménagements à y introduire, est une démarche normale et même sage qui permet d'avancer en connaissance de cause et sans faire de victimes.

The above statement is in fact an answer to various articles published in the Algerian press denouncing the lack of preparation and the unforeseen negative results this decision was about to bring (Benbouzid, 1993; Ouali, 1993b; Abahri, 1993; *Liberté* 05-09-2000). As for the Algerian experts in linguistics, this decision was received with consternation. Educators and psycholinguists such as Morsly, Louanchi and Bensemane were rather pessimistic about its implementation in the Algerian system of education at this level. Louanchi, an expert in psycho pedagogy, assesses the empty foundation of language planning in the country as such:

> Depuis l'indépendance, on n'a pas cessé de faire du gâchis de moyens et d'hommes. On forme des cadres dans une langue, le français, pour ensuite décider qu'on n'en veut plus, qu'ils ne sont plus utiles ou alors qu'il faut les recycler. On les transfère dans un autre domaine. Avec l'application de cette nouvelle disposition, des enseignants vont être remerciés. Introduire de nouvelles langues, cela implique de l'argent, des moyens pédagogiques, des enseignants, etc., la demande sera fonction des besoins, les a–t–on évalués? (quoted by Benbouzid in *El Watan*, 23–9–93)

English as a foreign language was introduced without adequate preparation and without assessing the real benefit and loss of such a decision. No policy was ever discussed regarding the introduction of English in place of French. English is neither culturally nor linguistically rooted in the country and cannot be taught in the same way as French. This decision was imposed by the local education authorities largely dominated by Arabic educated staff and with the tacit support of the head-teachers. The planning took no account of the fact that there were no English teachers to perform this task and that the level of English of the teachers who existed was far from the fluency necessary for the policy to succeed.

The real motive behind the introduction of English in education may be as much a further move in the anti-French campaign as it is a recognition of the need to prepare students for work in the higher education (HE) sector where English becomes essential. Whatever the motives the reality is that the English language programmes were hastily introduced and have been largely unsuccessful.

This chapter will now consider in some detail the importance of the main languages mentioned above and how they play their role in the Algerian population in general and among the scientific community in particular.

3.2 Arabic and the policy of Arabisation

The Arabic language is a dialect continuum and there are many varieties. The diversity reflects the vast regions that compose the Arab world, the historical development of each country, particularly under different colonisers, but it also reflects the internal ethnic, cultural and religious diversity within most of the Arab countries. The main feature that applies to the Arabic language is that it is the language used in the Koran, that is the holy book for Muslims. This version is called Classical Arabic (*al–lugha al–arabija al–fusha*), and it developed in the eighth and ninth centuries, it is considered to be the purest and most refined form of Arabic written expression and, as such, transcends all ethnic, cultural and national diversity. Classical Arabic is highly praised throughout the Arab world as the language of Islam and the magnificent tradition of Muslim–Arabian culture and science.

The Arab conquest and the declaration of Arabic as the one of God and of the Koran have affected greatly the linguistic situation of Algeria. Before this conquest none of the former languages used in Algeria - like Punic or Latin- reached such widespread use. Since the conquest a large number of Berbers have become Arab speakers. The progressive influence of the Arabic language upon the Berber language was achieved through the conversion of Berbers to Islam. In other words the Berber population more and more internalised the Arabic language through the reading of the Koran and the practice of Islam on a daily basis across centuries of Arabic influence. Because the subject peoples accepted Islam, the introduction of Arabic was never questioned. It was the language of the religion and carried on having a big impact because of this. The interaction between religion and language has always played a crucial role in mobilising people against all sorts of 'invaders' and in promoting national identity, Arabic and Islam being no exception in the case of Algeria during centuries until the present time. This particular aspect has been highlighted by Wright (1992:29) in these terms:

> The identification of a language with a religion has strong positive effects on the maintenance of that language, perhaps more enduring than any other since the use becomes ritualised.... In its religious role Arabic has made inroads wherever strong Muslim beliefs are held and has often been introduced with Islamization.

Wright developed her argument on the basis of research on Muslims in Britain who chose to study Arabic in order to better understand the Koran and Islam. This language is only spoken by a small minority of British Muslims whose origin is from the Arab countries. A similar attitude can explain the phenomenon of the place, role and spread of the Arabic language in the non-Arab world, the Berbers being, in the case of Algeria, the recipient of Arabic via Islam. In both cases –British Muslims in Britain and Berber Muslims in Algeria- Islam is seen as instrumental to defend and promote spiritual values. But the comparison stops here as the situation in Algeria becomes complex because the political regime has continually promoted the spread of Arabic at the expense of any other languages.

In Britain acquisition of Arabic is not expressed as a rejection of the English language and British government as such but as a free choice to know more about Islam and Koran. In the case of Algeria, the political regime puts precisely forward the place and role of Islam on

the Arabic language to prevent any form of other language expression, be it in the name of historical and cultural inheritance. Above all, the argument developed to play down the Berber expression is that the Arabic language and Islam are one in Algeria, any diversion from this stand is considered to be a threat to national unity built on Islam and Arabic during the colonial time under French occupation.

The other form of Arabic language is Modern Standard Arabic (*al–arabiya al–fusha al–haditha*) developed at the beginning of the twentieth century under the impact of the modernist movement. This Modern Arabic constitutes an adaptation of the classical one to the needs of the present time. It is this form of language that is nowadays used in modern literature, in the written press and the administration. It is also used in the media (radio and television) and education. However, neither Classical nor Modern Arabic are spoken languages in Algeria. It is Colloquial Arabic (al–arabiya ad–daridja) that is the spoken form along with Berber (see below).

There has been little open discussion about the pros and cons over implementing Arabisation after independence in 1962. The issue is highly sensitive and controversial by nature, it involves at the same time religion, colonialism, culture and identity and therefore could have serious political implications through manipulation by any social or political group (see Gallagher, 1966; Grandguillaume, 1979 and 1983). The degree of sensitivity lies in the historical background that has characterised North Africa across centuries of conquests but also the bloody war that caused so much harm in Algeria between 1954 and 1962. During these years the liberation movement united against France in the quest for a total independence, the launch of the armed struggle started in November 1954. The content of this struggle has been diversely interpreted inside and outside Algeria.

The religious tendency, mainly Arabic educated, defends the point of view that the liberation movement was by essence a struggle against the Christians and in favour of the implementation of Islam. The argument is based on the Holy War or *El D'jihad* as used by Muslims against the Christians during the Crusades. At independence, the argument goes on, it seems obvious that the victory over France was in fact the victory of Islam over the

Christians, and hence the victory of Arabic over French. Any departure from this stand is considered to be anti-Islam, anti-Arabic and anti-national.

The FLN (Front de Libération Nationale) party that led the liberation movement between 1954 and 1962 and remained the single party ruler in Algeria up to 1990 has within its ranks all kinds of tendencies, from the Ulammas (religious party) to the Marxists (Algerian Communist party –PCA). The political manifestos that it has produced prior to independence (e.g. *Summam Congress*, 1956, *Tripoli Programme*, 1962*)* underline the importance of the Arabic language and Islam but not to the point of asserting that this was the main goal of the liberation movement. In these manifestos religion and language are expressed in relation to a unified nation who aims at building a democratic state that recognises all faiths, cultures, including the acceptance of Europeans who so wish to remain in Algeria after independence, this aspect was even part of the Evian agreement between France and the FLN in 1962. The Arabic language and Islam hold an important element but nowhere near the one defended by the religious party of the Ulammas. This is why the other tendency, mainly Marxist – represented by the former Algerian Communist Party- insisted on the democratic dimension of the liberation movement and therefore rejected the exclusive affiliation to religion as defended by the Ulammas party. In the end, it seemed logical and not surprising that in 1962 Algeria made Arabic the official language and Islam the state religion. The Arabic language was the symbol of the newly independent state as expressed by Redjala (1970:115):

> Nous avons cru et affirmé que notre langue était l'arabe classique et nous nous sommes engagés à la rétablir dans ses droits en Algérie. Nous manquerions à notre parole et trahirions notre peuple si nous hésitions un seul instant à la proclamer langue nationale.

Following the institutionalisation of the Arabic language in Algeria the regime committed itself to implementing an Arabisation programme to replace French. According to Redjala this decision was taken by the army and certainly not by linguists or education experts. Therefore, they could not foresee the short or long term effects of such a programme. The Arabisation programme has consisted of a number of decisions to reduce the teaching and use of French in Algeria until Arabic is totally implemented.

By the end of the 1970s both primary and secondary schools were arabised. The consequence of this policy was that the balance of the education system became in favour of the Arabic educated teachers whereas it was previously in favour of the French educated ones. This phenomenon was to have, few years later, a tremendous impact over the entire education system, including universities, in the sense that it went from strength to strength imposing itself in terms of programme content and ideology. French language and French teachers started to becoming a constant target, blamed for being anti-national and pro-France. This culminated, during the 1980s, in the dropping of the French language as a medium of instruction. Grandguillaume (1997:5) explains this attitude as such:

> Le discours politique fait de l'arabisation un combat de la langue arabe contre la langue française- ce qui est vrai, dans la mesure où la première est vouée, comme langue nationale et officielle, à prendre la place du français. Mais elle est aussi présentée comme un conflit avec la France, voire avec ceux qui, en Algérie, utilisent le français dans leur activité- on les dénonce comme h*izb fransa*, tenants du "parti de la France"

The shadow of the war continues to cast a long shadow. When the religious movement won the local elections in the mid-1980s under the Chadli Bendjedid regime the education system became dominated by religious fundamentalism that fought fiercely against all forms of French expression. Finally, it was under the influence of such a political and religious party that the proposal of imposing English at the expense of French became a reality. Arabisation is coined as being the cause for triggering this movement and, eventually, led to the present destabilisation of the country as quoted by Hassan (1996:178):

> Une arabisation, certes, indispensable mais conduite à marche forcée, avec dogmatisme, chauvinisme à courte vue et obstination suicidaire. La manière dont a été traitée l'arabisation est probablement la cause principale de l'émergence islamiste en Algérie.

At the university level, the situation was slightly different. When Arabisation was launched in the 1970s it had involved particular cases only like History for example. Other subjects that were exclusively taught in French became available in Arabic as well; for example, there were an Arabic section and a French section for Law studies, an Arabic section and a French section for Economics and Management. The result is that employers preferred to

recruit French educated graduates at the expense of the Arabic educated ones. The reason given by the employers was that they noticed a big gap between the two levels of qualification. As a result jobs could not be found for the new generation of technicians educated in the Arabic language (Haddad, 1987; Taleb-Ibrahimi, 1997). This statement, which became more and more frequent in Algeria, infuriated even more the Arabic educated students and graduates. More political pressure was used during the early 1980s to reduce the use of French and to spread that of Arabic, the claims turned from '*more Arabic sections in more subjects*' into '*end of all the French sections*'. The regime gave in the mid-1980s by generalising Arabic in social sciences subjects and leaving French in the sciences, computing and medical subjects.

The problem became even more complex as the French educated lecturers had to switch to Arabic to teach very technical and difficult subjects, a task that failed many and which led to the departure of highly competent scholars because they were unable to transmit their knowledge in Arabic. A French educated lecturer of Economics, who had to switch to Arabic, confessed: "I can only transfer about 40% of my knowledge to my students because the explanation in Arabic does not come naturally, it requires more time and more attention to the language side, and this affects the flow of ideas and thinking expected from a university lecturer" (personal communication. Author's translation). Such a situation accelerated the resignation phenomenon and comforted the position of the growing Arabic educated lecturers who started to become dominant in numbers; from 623 lecturers in 1980 to 2200 in 1985 (Bennoune, 1988:289). The conflict between the French and Arabic educated teachers in primary education was to be repeated at the higher education level in terms of hostility from the Arabic educated lecturers.

An additional problem was the shortage of textbooks and reference materials in Arabic. As Dafa'allah (1965) warned: 'Any steps that are taken prematurely are bound to result in more loss than gain'. The weak specialised documentation was often used by the French educated lecturers to support the fact that publications in these subjects were lacking and, at best, translated when one could find them. A Syrian lecturer at the Economics department, who was fluent in Arabic, French and English, was in charge of the difficult subject Econometrics confessed that he was bitterly criticised by the Arabic section because he had

given them a bibliography written either in French or English only and not a single one was in Arabic. He had difficulties to convince them that he was unable to find one. Examples such as this (in architecture, engineering, computing) were very common among the Arabic educated community, they would rather have no bibliography than one in French!

Under the pressure of the Arabic educated lecturers the university became the focal point of the generalisation of Arabic in *all* subjects, including medical studies, and the removal of French. Strikes, demonstration and intimidation of all sorts led to the vote of a new law in December 1996 that is the generalisation of Arabic in all sectors to become effective from July 1998, and by 2000 foreign languages are banned in all debates or meetings in Higher Education institutions. Grandguillaume (1997) made the following remark: "L'Algérie de 1962 était totalement francisée. Celle de 1996 est largement arabisée. La loi récente la veut 'totalement' arabisée".

Indeed the decision taken by the government to ban the use of foreign languages from July 1998 had targeted all forms of communication written and spoken, to the point that the radical parliament members stressed that this law includes the daily newspapers published in French. The independent press opposed firmly such a decision and journalists were finally allowed to carry on publishing their articles in French. Apart from this exception, all paper work, education, companies, etc. would be entirely and only in Arabic and financial penalties would be imposed if not respected. Even imprisonment could be applied in particular cases. This is the situation in the present time and voices are still being heard here and then in the Algerian parliament that the law about the generalisation of Arabic is not being respected.

Before this law, the legal system was the first institution to be totally in Arabic during the early 1980s. The decision was taken by Benhamouda, an influent figure in the FLN party and a strong defender of the generalisation of the Arabic language in Algeria. Other sectors were to follow this example until the new law mentioned above about total Arabisation (see Taleb–Ibrahimi, 1997 for a detailed description).

The decision of total Arabisation was in fact an issue during the 1970s but it was never implemented fully. In this respect Mostefa Lacheraf and Abdellatif Rahal, respectively Minister of Education, and Minister of Higher Education during the 1970s, were opposed to such a plan. They both held the view that Arabisation should be implemented progressively, and a return to bilingualism was envisaged in order to solve the problems of Algeria's economic development. From the moment he was in office, Mr Lacheraf's objective has been in priority to freeze Arabisation. His position, regarding the Arabisation policy, was described by Granguillaume (1983:128) as such:

> Le problème de la langue n'est pas dissociable de celui de la culture: celle–ci est fondamentale, elle est comme le fond à la forme. Or la culture arabe se trouve actuellement en Algérie dans un état de décadence et de sclérose. Le problème essentiel est donc de la revitaliser par un effort soutenu, qui ne peut se faire qu'en l'ouvrant largement au contact extérieur: c'est là la fonction d'un bilinguisme, certes temporaire, mais inévitable, appuyé sur un mouvement de traduction. C'est dans le courant de cette renaissance culturelle que la langue arabe peut reprendre sa place, en étant véritablement réenclenchée sur une culture vivante et moderne.

Mostafa Lacheraf's view regarding the use of foreign languages was made against a background of falling standards in the years after independence, due to the manipulation of the Arabic language to achieve political objectives. He was criticised for being pro-France and anti-national because he expressed, rightly, that to be able to make Arabic progress in the world it was crucial to build a sound and effective education system. To reach this, he argued, foreign languages (French in the case of Algeria) provide the required input that could lead to the desired output as Hassan (1996:183) put it:

> Très rares sont ceux qui prévoient de graves difficultés et personne n'imagine que l'arabisation sera un des véhicules de la descente aux enfers. Tout au plus, pense-t-on, elle ralentira les choses. Un seul homme tente de redresser le système éducatif, y compris en ce qui concerne l'arabisation.

In other words, Lachraf tried to de-politicise the language issue by considering it strictly within a linguistic framework based on bilingualism. Bilingualism would have allowed Algeria to reach a better level of economic development similar to other countries in Europe and North America. Instead, like others after him, he was silenced in the name of nationalism and religion and nowhere could one find a genuine argument demonstrating that bilingualism was responsible for a cultural regression or at the origin of a civil war and

national disintegration. Curiously, his point of view has never been more accurately illustrated than Algerian experience since the mid-1970s. As Colonna put it:

> Retrospectively, an intelligent, socially and politically responsible solution, like the one proposed by Mostefa Lacheraf, one of the very rare intellectuals accepted in the national movement, built around a 'transitional bilingualism', seems totally fanciful and utopian (Colonna: 1988:111).

Finally, he resigned following this courageous stand. Many regrets were expressed following his departure from the government among the Francophones.

3.2.1 Arabisation and the Algerian writers

The Arabisation policy has so far focused on the political motives of the Algerian regime that sought to remove French as a necessary complement to the struggle for independence. The war against France was and still is expressed by some as a war against French and against the Algerians who continue to use it now. In this respect the argument used by the defenders of a full Arabisation is undertaken in the name of the unity of the Algerian people around a single language – Arabic- and a single religion – Islam. This policy has been facilitated by the fact that Algeria was ruled by a single party system during thirty years, a system where any form of free speech was banned. At the lower level, the education system was allowed, with the approval of some politicians, to neutralise the influence of the French educated teachers by removing them from key positions and by generalising the use of Arabic at the expense of French. Because the labour market showed a preference for the French educated graduates the next move from the defenders of Arabisation applied the same strategy at universities. The Algerian university is now almost totally Arabised with the exception of a few subjects such as medical studies and computing. This success achieved, it remained to neutralise any other form of expression in a foreign language, an euphemism used in Algeria to refer to French in fact. This came under the law applied in 1998 to impose Arabic in all institutions and companies.

The historical context of the 1990s is however different from the one that prevailed from 1962 to 1990 because a multi-party system has since been implemented. One major phenomenon took place in the meantime in the form of a large number of independent

newspapers published in French. The 'free' press has been very active in defending the right to carry on publishing in French despite virulent attacks by some members of the parliament who tried very hard to remove a newspaper if not published in Arabic. It is not surprising, therefore, that most of the journalists murdered by the terrorists were writing in French (some of them, however, were writing in Arabic). The point that remains to be analysed next concerns Algerian writers who publish in French and who are put in the same basket as the other categories of Algerians expressing themselves in French.

Assia Djebbar (1993), an Algerian writer, published novels in the French language, now lives and works in the United States. She says she loves the Arabic language in all Arab countries except in Algeria. She thinks it is a language of men and power. She never accepted to talk on TV, as she had to use Classical Arabic only (*El-Watan*, 08-11-93). Her message is simply recognition of the work achieved by Algerians who express themselves in French and whose reputation as writers has reached an international audience. Instead of rejecting these Algerian writers because of the language she advocates that they be translated in Arabic so that they can become available to audiences educated in Arabic only. The result is that all these writers are somehow outcast by the Arabic educated intellectuals as enemies of the Arabic language and Islam. She rightly raises the question about the masterpieces written by Kateb Yacine, Mouloud Feraoun, Mouloud Mammeri and others whose works should be translated to be studied in Algerian schools. She also defends a form of bilingualism in Algeria and that Arabisation should follow a progressive path until the Algerian society can fully master Arabic. Indeed, as explained above, Classical Arabic, for the illiterate population, is as much a foreign language as is French (*El-Watan*, 08-11-93).

3.3 The French Language: a necessity

As mentioned before, the French language was introduced by the colonial regime in Algeria. The French established and organised the whole economic, administrative, social and cultural structure of the country. French was the language which allowed social mobility among the autochthonous population (Lacheraf, 1964; Grandguillaume, 1979; Benrabah, 1998). The French language is no longer used as a medium of instruction but

remained as a privileged second language until autumn 1992. After that date English was brought in to oppose the paramount influence of French with little success (see below). At that date the success of the fundamentalist faction in government led to an increase in the provision of English language classes and a certain hostility towards French. This stemmed from a desire to weaken the position of the Francophone elite in Algeria, the French language is at the centre of all kinds of attacks in Algeria. Any attempt that could make Algeria participate in an international event along French speaking members is interpreted as an infringement against the national sovereignty, the Francophone summit being a typical example.

The Francophone summit was initiated by France to gather countries that use French as the official language or simply as an important foreign language tries to create a forum where ideas and experiences can be shared and an international cooperation can be built on this basis. Every summit is preceded by comments as to what extent such a summit is really useful and significant, and almost every time the question of the non-participation of Algeria in the summit is raised whereas countries like Egypt and Vietnam are full members. During a state visit to Quebec in 2000 by the current Algerian president, Abdelaziz Bouteflika, journalists did not miss the opportunity to ask him why Algeria has always refused to be part of the Francophone summit. His answer was that the benefits to Algeria from such an organisation were not clear and that it needed further contacts to study the question of whether or not to join this summit in the future. However, for the first time Algeria participated in early 2001 to the summit Francophone Africa and France held in Cameroon, a decision bitterly criticised by the religious parties and some members of the FLN party.

In Algeria the language problem has always had political and ideological motives behind it. As such, the Francophone summit seems a mine field where politicians fear to venture because of adverse popular reactions across the country. As far as the Francophone summit is concerned the non-participation of Algeria will continue to raise questions. However, individuals will continue to be part of the scientific and cultural events organised in the Francophone countries or elsewhere since this does not imply an official participation of the Algerian state.

Despite this, no one denies the necessity of bilingualism in Algeria. Former Ministers as Taleb El–Ibrahimi, Lacheraf, and more recently Hamrouche, in 1991, think that the French language should remain as a second language but certainly not prioritised over Arabic. In one of the conferences in 1972, Taleb–Ibrahimi underlined:

> Il n'a jamais été question d'un bilinguisme doctrinal faisant de l'arabe la langue des disciplines littéraires et du français la langue des disciplines scientifiques... Pendant une longue phase, nous avons besoin de la langue française comme une fenêtre ouverte sur la civilisation technicienne en attendant que la langue arabe s'adapte au monde moderne et l'adopte et que l'Algérie forme ses propres cadres arabisants.

French remains dominant in the economic life of Algerians. In one of the six investigations made by 'l'Etat de la Francophonie' in 1991, in Algeria 95% of scientific information is done through French language. This broadly includes the agricultural sector, research and technology. This fact creates an obstacle to the coming generation of Arabic educated students. More detailed figures are reported in Taleb-Ibrahimi (1997:42) on the number of publications. She reports, for example, that out of the 1304 titles published nationally by University Press called 'Office des Publications Universitaires' 466 titles are in Arabic and 838 in foreign language (French)

In contradiction to the claim that Arabisation is on its way to being completely implemented, one notes the huge amount of recent newspapers (70%) published only in French. There also exists an important number of Algerian writers writing and publishing in French only. More than eight millions of Algerians watch French programmes on the television via satellite dishes. As Stellio Farandjis (1991), General Secretary of 'Haut Conseil de la Francophonie', notes:

> Dans les rues d'Alger, les jeunes inventent des mots français tous les jours. Méfions-nous des apparences trompeuses. Les francophones doivent être très respectueux du monde arabe et de la langue arabe. Il existe une arabo–francophonie ou les populations de langue arabe, mais aussi de langue berbère, utilisent le français, souvent échangent en français ou passent d'une langue à l'autre.

As a matter of fact, French language is also used at the hairdresser's, in the waiting room at the doctor's, in most shops and in the streets along, or mixed with, Arabic and Berber. A

final remark to this section, regarding the place of French in the Algerian society, is given by the sociolinguist Taleb-Ibrahimi (1998:4):

> Elle oscille constamment entre le statut de langue seconde et celui de langue étrangère privilégiée, partagée entre le déni officiel d'une part, la prégnance de son pouvoir symbolique et la réalité de son usage d'autre part.

3.4 Algerian Arabic and Berber: their positions and importance in Algeria

Both French and Classical Arabic are not usually mother tongues in Algeria, therefore all their intricacies are mastered only with great difficulty by Algerians. However, in Algeria, the linguistic problem is reduced to a conflict between French and Classical Arabic and linguists and politicians have not discussed the place and importance of the mother tongue; dialectal Arabic or Berber. This is a typical example of the prestige of literary standardised languages against spoken vernaculars. Redjala (1970:110) indicates:

> Cette situation, on s'en doute, n'est pas le fait du hasard, elle est liée à des conditions historiques objectives, plus exactement elle repose sur une aliénation linguistique et culturelle qui dure depuis de nombreux siècles.

It is important to note that although these languages are used extensively everyday at home and in the street, they are also used at school between teachers and students, only as conviviality not as the formal medium of instruction. And yet, none of them has a written status although for Berber language some traces of Berber alphabet were found among the Touaregs (Berbers of Southern Algeria), named the 'Tifinagh'. This lack of writing system has, partly, caused their under recognition.

Informally and without an official status, Berber is taught to hundreds of Algerians. Recently cultural claims are expressed by the 'Kabyles' (Berbers in north east of Algeria; on mountains of Greater and Lesser Kabylia) through the Berber cultural movement called MCB (Movement Culturel Berber), and supported by other political organisations such as RPN (Rassemblement Patriotique National) and Ettahadi.

There has been a renewed interest on the question of the place and importance of Berberity. The claims are about the acknowledgement of Berber as an official language along Arabic

that could be taught at schools. These claims have never reached such a critical point in Algeria before. Demonstrations started at the beginning of the 1994–95 academic year, mainly in Greater Kabylia. Up to now, there has been no clear decision from the government to solve the linguistic problem of Berber (or Amazighe). In reaction to this silence, the RPN declared to the Algerian daily newspaper El Watan (26–9–94):

> La revendication de l'Amazighité participe à la reconquête de l'identité nationale. Le président Mohamed Boudiaf, dès son retour au pays, a clairement posé dans la plate-forme du RPN, les composantes de l'identité nationale selon leur ordre historique: amazighité, islamité, arabité.

The linking of linguistic and cultural problems to the political situation does not simply concern the Berbers. The riots in Algeria during the 1990s have not only social, political and economic motives but also linguistic ones. Therefore, this party urges the state to adopt a more flexible approach towards the Amazighe question to unite the whole nation, that is the part that uses daily Arabic and the other that uses Berber. It is on this basis that the Berbers wanted Amazighe to be recognised as an official language in addition to Arabic because it has been the language of the first settlers in North Africa. In other words, Amazighe has been the mother tongue over several centuries for a large proportion of the Algerian population. The present thinking on mother tongue teaching is succinctly resumed by Romaine (1994) and others. As early as 1953, in a UNESCO report, it was argued that the child should receive his early instruction in his mother tongue for it is familiar to him and therefore, will facilitate his learning. Ait–Ouali (*El Watan 11-10-94*) held the view that all languages are equal linguistically speaking, then he quoted Saib (in the same article, *El Watan 11-10-94*), a lecturer at Rabat university in Morocco, saying:

> Il est universellement admis que l'instruction effectuée dans la langue maternelle de l'individu, lui assure une acquisition des connaissances sans trop de peine et une socialisation sans heurts ni déchirement.

The Algerian child starts school at the age of six by learning modern standard Arabic, which is different from the Algerian one, and very soon afterwards, at the age of nine or ten, he must learn a foreign language French traditionally or now more and more English. When the mother tongue is not used at the beginning of the child's schooling this might cause psychological and affective problems in the child's development as shown by some

researchers such as Smith (1928), Redjala (1970), Ait–Ouali (1994). Furthermore, Redjala (op.cit.) pointed out that this Algerian will never manage to master one language as a means of work so vital to scientific and artistic creation.

Most educators and linguists in Algeria would criticise the present system of education, and therefore, according to them, it should be reconsidered by giving a privileged place to the teaching of the mother tongues (Todd, 1983). Redjala (1970:121) was already making the point thirty years ago:

> ....Puisque, quoi que nous fassions, elles [langues maternelles] l'emporteront un jour, autant hâter leur avènement pour abréger nos peines et nous garantir de tout recours à la force

Intellectuals in Algeria like Kateb Yacine, favour the use of the mother tongues at schools; being more representative of the authenticity of the Algerian culture and playing a crucial role in the child's development. Among them Eliman (1989) who argues that:

> L'avenir de l'Algérie se joue, à notre sens, dans la reconnaissance sans aucune sorte de complexe, de la langue maghrébine... L'enseignement, dès le primaire, se ferait alors dans la langue maternelle et offrirait l'arabe classique comme première langue de communication internationale.

According to him, in this way, a learning of any foreign language such as French or English will contribute more to the blossoming and development of Algerian children making an end to all this conflict. Miliani (1998) blames the political sphere for not controlling, through decrees and laws, the use of the native languages and dialects. He declares that this process has spelt out the present catastrophe in Algeria.

Berber, the language of Algeria's origin, had always existed alongside the language of the rulers, first Punic, the language of Carthage; second Latin, the language of Rome; third Arabic, the language of Islam; fourth and last French, the language of the last colonial ruler. The conqueror always imposed its mode of expression in the administration as well as in sciences and arts. Obviously, for reasons mentioned above, Arabic has the greatest impact on Algeria, and this at different levels of the local population, education included. On this point Redjala considers this decision as a real alienation. He thinks that now, Algeria's

cultural and linguistic alienation are officially confirmed. Actually this alienation concerning the choice of languages in the Algerian education seems to continue at the present time with the attempt to alternate French with English language at the primary level (see the next section).

3.5 The English Language: Language of Science and Technology

In Algeria, English became the first foreign language in secondary schools from the 1970s when French, although not the official language in Algeria from 1962 onwards, was still the main medium of instruction. When education became totally Arabised, in 1989, French replaced English in this respect and the latter became, therefore, the second foreign language to be taught in Algeria. At university, however, students could register for a degree in English studies in the department of Modern Languages. The situation changed dramatically as mentioned earlier when the fundamentalist movement in Algeria won the local elections in mid-1980s there was an attempt to remove French from schools. The lack of choice and the rigidity of the Algerian education system dominated by anti-French ideas imposed English on children who are daily exposed to the French language either through the press (Algerian newspapers written in French), the radio (Algerian and French radios) or TV (Algerian and French TVs). Furthermore there was a shortage of qualified teachers to teach in English, a subject that is totally strange to them given the Algerian cultural environment that has been shaped by contact with French culture and language over one and a half centuries.

English was not perceived as a valid means of instruction able to bring to Algerians the level of knowledge and expertise gained through French (*El Watan*, D & M 2000; Ouali, 1993a). As a result of the inept way that English was introduced into the primary system there have been failure and a general rejection by the students, for example, class numbers have fallen (*Liberté* 05-09-2000). There were 48 000 pupils taking English as their first choice of foreign language in 1993-94, only 10,221 decide to choose this language instead of French in the academic year 1999-2000 (reported in *Liberté* 05-09-2000). The diktat policy of introducing English at primary education with such poor preparation was obviously, as already mentioned, to serve a political motive. Considering the future of the

school children in Algeria, it is the fear of some educationalists that heavy damage will be done again as with the policy of Arabisation: "Ils subiront le sort peu enviable des élèves issus des sections totalement arabisées, qui, au lendemain de la généralisation de l'arabisation au bout de leur cursus, ont dû se rabattre sur les sciences humaines" (*Liberté* 05-09-2000)

The above argument is not strictly against the importance and the need of English in Algeria, it simply underlines an order of priority in the Algerian education system regarding the role of L2. English is and remains a crucial language to widen and strengthen scientific knowledge as illustrated by the medical community in Algeria. It is believed that the introduction of English at the primary level is not appropriate because of the place and importance of French, but it is a necessity at the higher education level where students require further knowledge that is only available in English. This conflicting view is shared by Swales (1995) who also explained the relative importance of French and English in Tunisia in terms of priority. Indeed, he explained that French is initially enough for those students who are job seekers, and therefore do not need English. As for those who are doing post-graduate studies, English becomes a useful language that can improve their standard. In his words: "But, of course, when you are specialised, when you are finishing your first degree, and doing your *maîtrise*, the need becomes very different. That is when you need it". Further on, he adds: "You may still have to teach a little bit in the first year, but don't fight for more hours with the first year if you can get those hours to teach the third year. I think the students are more motivated" (Swales, 1995:9). The historical backgrounds of Tunisia and Algeria are very close because both are former French colonies and both use Arabic as an official language, this is what makes Swales' argument valid in Algeria too.

English may not be adopted with enthusiasm, only as necessity. It may not be acquired to any level of competence as Fishman (1977) remarked that in the non–English mother tongue countries English was more learned than used, more used than liked, but it is still necessary.

The pressure of English use is felt more and more in Algeria, it is even displacing both Arabic and French in particular areas. Although French is still the medium of instruction in medicine, nursing, pharmacy and other science studies, English for medical doctors, for

example, is assumed necessary and important as a source for additional knowledge and expertise. In this respect, it is also assumed that they can use this language to have access to the most recent references, current scientific findings or even looking for an international audience by publishing their articles in internationally well known journals and reviews. As Meyer (1975) underlines 'most of the best contributions in science and medicine are published in English in international, European, American or British reviews'.

English is clearly becoming the dominant language of power in political, economic, scientific, cultural and social domains. This has been widely discussed in this thesis (see chapter 1) and elsewhere in Eggington and Wren (1997); Wright (2000) and Pennycook (1994).

3.6 Conclusion

The language policy in Algeria is very complex as there is a striking difference between the *de facto* use of working languages - Arabic and French- and the *de jure* use of a single one – Arabic. In the first instance Algeria appears as a multilingual and multicultural society as it would logically be the case given the various conquests that have marked the country over many centuries of history. The multilingual dimension refers to Arabic, Berber and French, and the cultural one is closely associated to the influence of the respective population who settled in Algeria successively and/or simultaneously. The major clash between the existing culture and the imported one happened from the invasion of Algeria in 1830 and lasted until 1962 and beyond.

It is precisely during that period that the liberation movement defended the implementation of Arabic as the official language and Islam as religion of the state. Therefore, in the *de jure* case, the Algerian regime has institutionalised Arabic as the single official language and claims that Algeria belongs to the Arabic and Muslim world, that is imposing a monolingual and monoculture system under the single party system after independence in 1962. The system is rigid and authoritarian, where different views are banned. Dourari (1998) claims that Algeria's true dilemmas is linked with the antagonistic perceptions of its past and future. Algeria has never been recognised by its own leaders as a plural entity

within an integrated nation altogether Berber, Arab and Islamic. He tries to show how these three dimensional identity involves linguistic and ideological issues.

The policy of Arabisation has failed to marginalize the Berber language and culture. On the contrary it made it stronger as Lavenir De Buffon (1998:11) expressed:

> Loin d'éradiquer le berbère, la politique dite d'arabisation va plutôt renforcer la prise de conscience kabyle. Quant à la francophonie d'Algérie, renforcée d'ailleurs par le mouvement berbère, elle ne s'identifie plus guère, dans la population algérienne, à la colonisation ou à la domination de la France : elle apparaît comme une réalité du pays, un héritage de l'histoire, tout comme l'islam et l'usage de sa langue, à la suite des invasions arabes (Le Monde 14-07-98)

The authoritarian attitude of the regime regarding the use of French in Algeria is in total contradiction with the reality at the society level where, for example, publications in French are often well received by the population. The special case of the written press is a good illustration of such a situation whereby the volume of newspapers in French sold is higher than that in Arabic. The opponents to the French language tried to ban newspapers in French in the name of the 1998 law of Arabisation. Their attitude is motivated by narrow interpretation of national identity and culture whereby any Algerian who uses this language is not in fact Algerian and Muslim. Instead of promoting high level of publications in Arabic in different subjects the opponents to French, including the university lecturers, members of the parliament and senators, on the contrary try to prevent Algerians who publish in French or who give papers in French during international conferences and workshops. The diverse nature of Algerian society has never been recognised by the Algerian regime, nor by the Arabic educated intellectuals. The dividing issue remains, as ever, the predominant role of Arabic and the rejection of all other languages, be it Berber or French. Now there is an addition consideration that is the need to acquire English.

According to Kennedy (1983), the need and importance of language policies and planning are felt even more nowadays, particularly in education. He expresses this as follows:

> The close relationship between use of a language and political power, socio-economic development, national and local identity and cultural values has led to the increasing realisation of the importance of language policies and planning in the life

of a nation Nowhere is this planning more critical than in education, universally recognised as a powerful instrument of change.

Language planning in Algeria is neither community based (Haugen, 1983; and Fishman, 1971b) nor expert based (Tauli, 1968) but authority based. Making such a choice resulted in heavy cost to Algeria and education has to bear the consequences. Arabisation was introduced in the most inefficient way. Lack of resources, experts and skilled teachers led the country to serious disasters in development matters. Other consequences linked with this linguistic problem are, obviously, the weakness of the country to develop economically as well. Bouattia (1993:8) stated: " ....The bargaining power of Algeria being weak due to the local low level of scientific and technical capabilities".

This brings us to the focus of this thesis where the inefficient implementation of appropriate language learning has acted as a brake on the individual and group ambitions of a sector of the scientific community as we shall show.

CHAPTER 4

RESEARCH HYPOTHESES, DESIGN AND METHODOLOGY

The theories set in chapter 2 have broadened our understanding of the concept 'community' and have also suggested the only way to study community is from the inside. The present research argues that a mainly qualitative approach with some quantitative backing will help to reveal the way the community being researched uses English, its attitudes to the necessity to do so and the perceived consequences of success and failure.

4.1   Hypotheses, research questions and methodology

The hypothesis to be tested by this research is that the scientific community in Algeria is handicapped by the complex language situation in which it finds itself and in particular has difficulty participating in the international research community. Doctors' inability to use English thus affects their competence and efficiency. As a consequence, it may also affect the health of the population.

4.2 The questions

The key questions to be posed are:

- In which language does information enter the Algerian medical community? What are the media and modes of exchange?

- In which language does information circulate within the Algerian medical community? What are the media and modes of exchange?

These will be broken down into subgroups, which will include:

- Is medical literature written in English essential to the doctors' work?

- Can they get relevant and up-to-date information from sources in other languages?
- What languages do they use for discussion of new research published in English?

The research will then seek to ascertain how the subjects communicate their own work to the wider community;

- In which language do these doctors contribute to research journals and participate in scientific conferences?
- Do they feel that they are blocked in any part of their work by the language medium that they have to use?

In general we will seek to establish the effect of needing to use English on the efficiency of the doctors' work.

However, before talking about the models that helped most to design this research and the methods used to uncover the functioning of the community under study, it is necessary to identify the members that constitute the community to be studied. This description will cover the doctors' specialism, giving clarification of the terminology dealing with their grades and positions, actual place of work and the academic requirements to enter the discourse community. At a later stage in the chapter the reasons for choosing these subjects will be given.

4.3 The subjects

The group of doctors to be investigated are mainly a sample of Paediatricians working in a Paediatrics centre located in Constantine, Eastern Algeria. This centre, that represents the place where the present research is conducted, is run by the National Institute of Medical Sciences (INESM) and part of the main University hospital called "Centre Hospitalier Universitaire (CHU) de Ben Badis. These doctors are either 'résidents' (in-house officers) or 'maîtres-assistants' (registrars). The résidents' admission to work and study at the hospital is highly selective. After they pass their degree as general practitioners, they sit for a very competitive exam called 'concours de résidanat'. These résidents are on a four year course which is taught in French by elder members leading to a final exam for the gaining of a degree of 'DEMS' (Diplôme des Etudes Médicales et

Scientifiques) and eventually to become 'maîtres-assistants'. There is a theoretical component to this exam based on lecturers' (i.e. consultants) notes and personal documentation. And there is a practical component to the course which is spent as a résident in the main hospital and/or other clinics. Here they will have to use both Arabic and French with their patients and nursing and hospital staff. If they are Berber speakers there may be occasions when they use this language with their (Berber-speaking) patients. The final exam is held for everyone in the capital, Algiers. It consists of an oral test (in French) whereby the candidate is asked to make a case report on a particular patient, to diagnose and to suggest the appropriate treatment to the patient's disease. The written test asks candidates to answer a theoretical question in a four hour paper (in French).

Students who pass this exam become specialised in Pediatrics 'Médecins Spécialistes'. A further examination (pedagogy and practice) is required before doctors can become full 'Maitre–Assistants. At this level they are expected to teach the next generation of students. The maitre–assistants are also the supervisors in the hospital who eventually become 'Docents' (consultants) after completing research work that leads to the achievement of a doctoral thesis in medical sciences in their terms: DESM (Docteur en Sciences Médicales). In addition they must have a substantial list of publications and pass an exam which, in turn, consists of a case report, a pedagogical test and a translation test, (an English text to be translated into French). These docents might also be given the title of 'Professeur' on the basis of further published research, experience and length of time spent in the health services.

This research will focus mainly on these maitre–assistants. They are the future leaders in the profession. They are the professionals who are progressing in their careers. They will need to be effective in a number of different discourse communities. They will need the languages of the Algerian population to treat their patients (Arabic, French and perhaps Berber). They will need an excellent command of formal and specialised French to pass examinations and eventually to teach and communicate within the Algerian medical community. They may desire and need access to publications in English to access the latest research. They may need to write and present in English to be part of the international research community (IRC). It is our hypothesis that for many of them, English is an impediment to their efficient access to information and to the fulfillment of

their ambitions.

The residents will also be a focus of the research. For this group English is not considered a fundamental requirement, as they do not have to write a thesis.

> The résidents prefer global questions for their exam and therefore, do not need to go into depth in their research. The medical literature written in French is quite sufficient as perceived by one of the informants (Dr5/MA/Médecin-chef/93, author's translation).

Furthermore, this has been confirmed by another informant reminding me that the type of learners I had in the researcher's classes of English for medical purposes came from a particular group:

> Did you notice that the people who were coming more frequently are mainly the ones preparing a Doctorate in medicine? ((Dr8/MA/94, author's translation).

4. 4 Methodology

In our attempt to find answers to the questions posed by our hypotheses we looked first for a suitable methodology.

4.4.1 Ethnography

The research method was to draw on the tradition of ethnography. Ethnography 'involves the researcher describing the way of life of a group of people" (McNeill, 1995:64). The methodology has its origins in the nineteenth century when sociologists studied the way of life of tribal peoples. The approach was developed through the technique of participant observation when scholars such as Margaret Mead (Mead 1935) went to live among the peoples she studied and shared their way of life. Participant observation is a technique for collecting data rather than a complete research paradigm. The Chicago School of the 1960s used the same approach, but this time their subjects were not native, 'primitive' peoples but groups in America, ranging from criminals to suburbanites. They observed

the behaviour of their subjects in natural settings.

There have been some queries about the term "ethnography" as a methodological orientation. According to Swales (1998) its use should be restricted to particular studies such as cultural anthropology or sociology. One of the other reason Swales gives for leaving it out in his own research on 'texts' is because "the term itself has become a conflicted and controversial one" (Swales, 1998:1). Furthermore, he was also discouraged by Van Manaan (1995) warning about this methodology. He quoted it as follows: "Ethnography is no longer pictured as a relatively simple look, listen and learn procedure but, rather, as something akin to an intense epistemological trial by fire" (Van Manaan, 1995:2; quoted in Swales, 1998:2). However, this research claims to be an ethnographic one for the research questions and the key issues are developed out of the data. As Chaudron (1991:189) claims: ".... Ethnographic perspectives adopt context-dependent, location specific descriptions, only after observation has begun".

4.4.2 The development of the research problem and selecting the research sample

The pre-fieldwork phase occurred when the researcher was a teacher in the Algerian higher education system. She was aware of the problems that the complexity of the language situation was producing. The change in the language of wider diffusion needed for access to international research findings and participation in the international community was one area of difficulty. Algerian scientists needed to work in two foreign languages during the period when English was overtaking French (Chapter 1). The Arabisation of secondary schooling with all the consequences this had on language competence in these two languages of wider diffusion was another (Chapter 3).

She formulated this as a problematic area worthy of enquiry, was accepted as a research student in the UK and began the background reading. Gathering the data was organised for the academic year 1992-1993, when she returned to Algeria and worked as a foreign language teacher in the medical school in Constantine.

4.4.3 Field relations

This gave her privileged access and opportunity to study the medical fraternity. She was an insider for the period of her research with a reason external to the research to be present in the community. Her access to the sample was regular and over a long period (one academic year). Her interaction was primarily the business of English language acquisition, but conversations about the needs for and difficulties of accessing information in English arose naturally and regularly at the beginning and end of classes. This methodology brings up the problem of whether the researcher admits that s/he is conducting research or not. Covert research is likely to produce findings closer to 'reality'. However, many researchers feel that this contravenes the ethics of research and that subjects should know (McNeill, 1995). Whereas the researcher did not always mention her research on these occasions, nonetheless it was no secret that she was engaged in this work.

There were interactional constraints in that she had a professional relationship with these doctors and it could be argued that they might be reluctant to express their problems fully to her. However, as the English teacher she was not important in the medical hierarchy and in the very nature of her work, the subjects' difficulties with English were exposed. She believes that this made it likely that their responses were uncoloured by questions of prestige and pride. They had no reason to lie about their difficulties with English or their pressing need to access English medium literature when she was the person employed to help them overcome their problems and find strategies for acquiring the information

Moreover these formal relations with the members of this DC as the accredited person to deliver language tuition meant, however, a high degree of personal involvement on her part. She needed to be aware of this. In addition she had other links and privileged access to the medical fraternity. This happened in the following ways:

- She was linked to them in social networks
- Her family was treated by them

She thus was able to interact with them informally and as a client/patient in their clinics. She also socialized with the particular group to be interviewed. Some of their discussions touched upon other topics such as politics, economics and problems of society in Algeria.

She was accepted as one of the professional group.

She did not suffer the difficulties signaled by Werner and Schopfel (1987:257) stated that 'Participation in a strange social system is always problematic. Natives almost invariably perceive the ethnographer as an intruder'. However, the present researcher, who is part of Algerian society, certainly was able to gather data more easily during her investigation than a non–native one. She was advantaged by being a speaker of all the languages in use in the DC. Naroll (1962:160) pointed out how essential knowledge of languages is for reliable research: 'Ethnographers who control the native language are more reliable ethnographic reporters than those who do not'.

More importantly, is that the hypotheses that "expected to emerge from the research as it goes along, rather than be specified from the start and used as a guide to the kind of data that is sought and collected (McNeil, 1995:65).

4.4.4 Research design influenced by the work of Swales and Checkland and Scholes

Then based on the conceptual framework established in chapter 2, as well as the models that have been adapted from it, a research design was set up. Combining some of the features included in the different approaches used by Swales and Checkland an Scholes described above, the research set out to provide answers to the following set of questions, through observation, questionnaires and interviewing.

1. Is there a publicly set goal for the group to become more efficient in the use of English scientific texts in order to become a member of the International research community (IRC)?
2. Has there been a strategy to develop more efficient modes of accessing the IRC: discussion of journals used and support for access to scientific texts?
3. Has there been a strategy to help members prepare their contribution to the IRC. (preparation for conferences, meetings, lectures, discussions, etc.)?
4. Is there an understanding of medical literature as a particular genre (or text–type) which had to be learnt in addition to general English (patients' reports, phone calls, mail, journal articles, meetings, conferences, etc.)?

5. Does the community have a minimum critical mass? Do they have enough expertise to pass onto the neophytes the capacity to react critically to scientific discourse?

6. Is there an efficient transformation process? Does the information which comes into the community circulate efficiently?

7. Are there any blocks to this transformation process from outside the community (ministry of health, ministry of higher education, etc.)?

8. Are there any environmental constraints (organisational constraints, resource constraints, linguistic constraints, etc.) that could block the transformation process?

9. Is the community soft-shelled or hard-shelled? What is the density and multiplexity of the in–flow and out–flow of scientific texts within the community and between the sub–communities?

10. Are the doctors efficient actors, ensuring the health of the nation, or is there room for improvement through better access to information?

4. 4.5. Research Design influenced by the work of Reeves and Wright

Another research tool used in the research design came from the work done by Reeves and Wright (1996). The framework for the points of focus on the media and modes of communication between the IRC and the members of the Algerian DC were provided by adapting one of their flow charts (see figure 4.1). This chart makes clear the inter-relations that exist between the various actors using different modes of communication. It also underscores the necessity of knowledge of a foreign language. The information enters the DC in a foreign language (undoubtedly English), so is the transmission of this information to the IRC it has to be understood through the same language in which it entered the community, unless it is translated. This only occurs in a proportion of cases.

FL

International Research
Community

Mechanisms of
Communications

| Journals | Conferences | VScholars | Circulars | etc. FL needed

University

| University Executives | Department Heads | Individuals |

| Field Work | | Research Project |

Completion

DISSEMINATION   FL
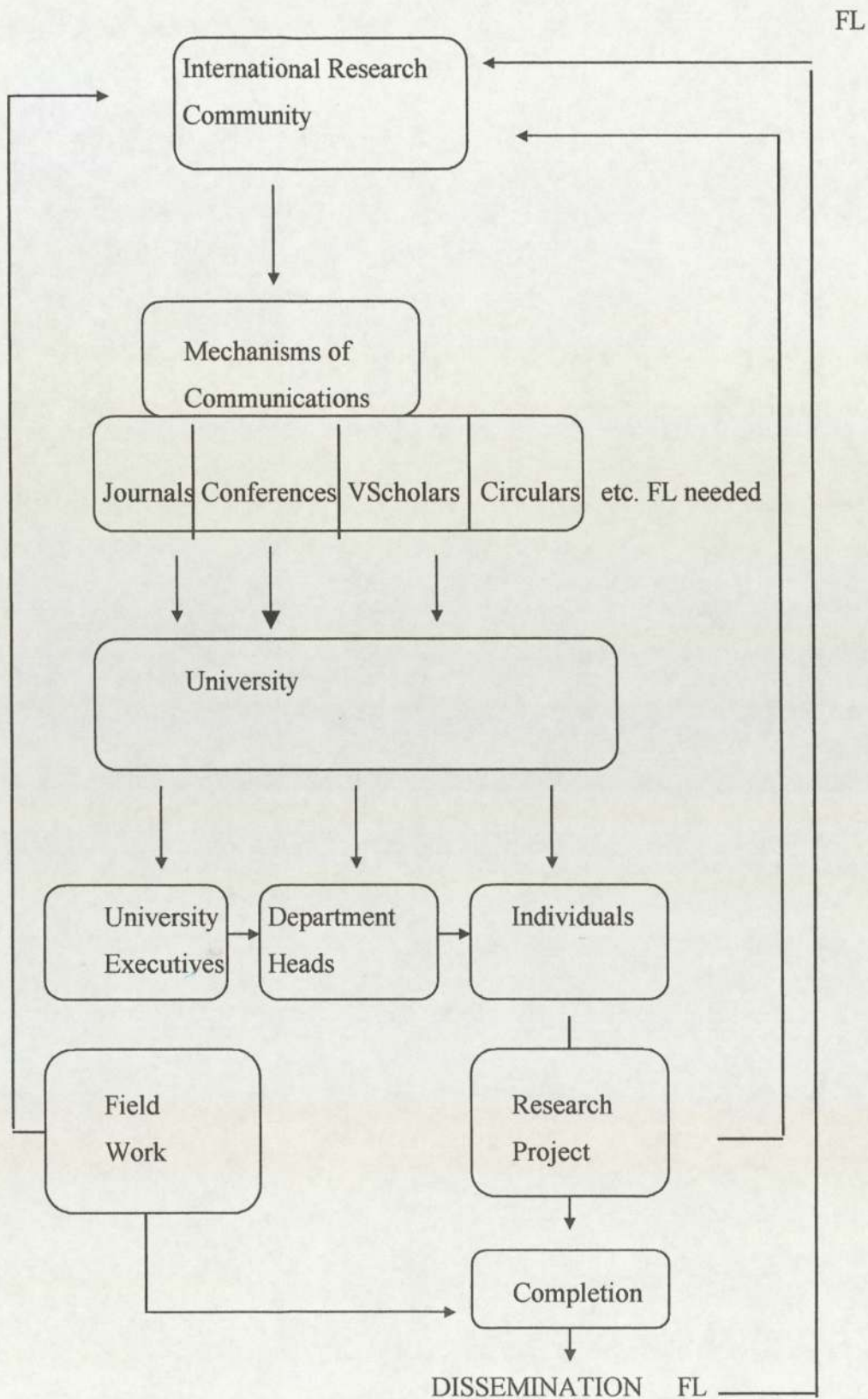
**4.1 Road Map of the Mechanisms of Intercommunication in a Research Community
(adapted from Reeves and Wright, 1992)**

The purpose of this research tool is to help us to examine the accessibility of the English scientific texts in the medical community of paediatricians and the efficiency of mechanisms of intercommunication between the members of this community. In other words, it is exploring the effectiveness with which the information, through French or English, flows in and out of the community under study. Establishing the communication channels with texts will help us determine the functional efficiency of the system. The attempt is to find out whether this information is positively affecting the members. This can be shown from their active participation in the target community. Therefore, the researcher will

1. examine the mechanisms of the delivery system of information of the community;
2. examine the purposes for which the information is needed;
3. identify the genres which dominate
4. uncover the actual routes which scientific information from the IRC takes within the community
5. discover how much use is made of this information among the participants
6. evaluate the extent of their participation in the IRC

In order to provide the answers to the first question, the qualitative and quantitative research establishes

_ the physical location of the information,
_ identifies the users,
_ determines which language is used inside the community to access the information (in English original, translated into French or Arabic, formally or informally
_ quantifies the proportional use of each language (see appendix one)

In concrete terms this led the researcher to look at their mechanisms of intercommunication, i.e. journals, conferences, newsletters, phone calls, etc. The research focuses on the communication channels established with texts.

To answer the second and third questions the qualitative and quantitative research will look at the information which the doctors consult and note the frequency of language use

inside this community, the language choice constraints on readers and the strategies they employ to fulfil their purposes

The fourth and fifth questions are dealt with mainly by questionnaires and interviews where the researcher examined the circulation of information within the community and found out what texts had been produced within the community and then published in the wider world. This participation through publishing, lecturing, participating in conferences was seen as the key measure of success in developing language skills to the degree necessary for full membership of the IRC (see Appendices one and two).

4.5 Participant Observation

The researcher kept field notes throughout the year of data collection. These allowed her to log what she observed in the course of her work and to record insider accounts of problems as they occurred in every day interaction with the subjects. Many remarks which were pertinent to the research questions were unsolicited. Indeed the number of unsolicited accounts of problems is interesting in that it makes clear that language is acknowledged as a major issue. The research reflected their concerns.

Thus the organisation of the data from the field notes helped in reformulation and refining of the hypotheses. At an early stage the researcher had believed that French might be able to play a large role in fulfilling the doctors' needs. As the work progressed it was clear that the hegemony of English was too great for the doctors to use the stronger of their L2s in accessing the IRC and the research was reoriented to focus more precisely on English.

The dividing line between interview and spontaneous conversation is difficult to draw (Hammersley and Atkinson, 1995). Where the interview was a formally arranged interview in a bounded setting, the exchange has been transcribed and the findings tabulated and appear as interview findings. Where the informal conversation provided data, this has been included in the general description of the setting (chapter 3) and it also informs the analysis (Chapter 6).

4.6 Questionnaires

To systematise what had been observed in participant observation the researcher constructed questionnaires. The questions posed were composed in the light of her observations (see Appendix one).

The present research was carried out overtly. All the informants were aware that the researcher was studying the problem of language and information and the circulation of knowledge. This was considered to be essential for the ethics of the research.

Because the research was overt it was possible to administer questionnaires. These were considered necessary to provide the data to answer the first questions posed

- In which language does information enter the Algerian medical community? What are the media and modes of exchange?

- In which language does information circulate within the Algerian medical community? What are the media and modes of exchange?

These questionnaires were structured, popular kind of quantitative research. This technique was chosen as a first step to provide evidence about the languages in use.

Maher's (1986) work on the role of English language among the Japanese doctors was a starting point for the compiling of this questionnaire. In his investigation he tried to evaluate, from a broad sociolinguistic viewpoint and by means of data drawn from a single profile (a medical community), the extent to which English is used and valued in international medical community. Maher considered only the use of English language and in one area: the doctors' work, whereas this method goes beyond this scope. This research includes the use and importance of three languages: Arabic, French and English; stemming from the *de facto* language situation in Algeria (see chapter 3), and in three different areas: the doctors' operational work at the clinic, the doctors' academic research and the doctors' teaching of medicine to other medical students (neophytes). The initial

idea for looking into these areas lies in the doctor's specific activities within the hospital which involve simultaneously the above three tasks and this has been underlined by one of the informants as follows: 'Le travail de l'hospitalo-universitaire, il soigne, il enseigne, mais il cherche également'. The rationale for the interest in these particular areas is to find out in which area is one language more essential than in another and what is the reason? What is tested here is the attitude of individuals towards the value of one particular language from their own frame of reference.

The questionnaire (see appendix one) was designed to ascertain 6 major categories of question:

1. Personal details including name, age range, degree, speciality in medicine, roles or functions at the centre, whether they are taking any research for a higher degree achievement and date of registration.
2. Medium of reading (accessing) medical information considering which languages are used to access it, its frequency and relevance to clinic, teaching and research.
3. Strategies of reading medical literature in English such as: speed of reading, rate of comprehension, order of reading (abstract, title, results, etc.) and reasons for following particular sequences.
4. Physical access to information or identifying the sources for obtaining relevant documentation in any of the languages in use (French, Arabic, English, others); network to specify such as from colleagues, supervisors, libraries, through internet or others either at a national or international level. They were also asked about their own preference of the journals they would consult in English and to list 6 to 10 keywords for a selection of an article.
5. Any scientific participation either locally or internationally.
6. Needs and motivations for learning English.

4.6.1 Representative nature of the sample

One large-scale questionnaire given in French language to a sample of 60 doctors from different clinics and holding different positions and grades during the years 1993-96.

There has been a return to the researcher of half (30) the total responses administered. We

consider this number as representative of the total community as the respondents were balanced for age, sex and seniority.

The questionnaire subjects were numbered 30 and their significant feature was:

Gender	14 women; 16 men
Age	20-39 years old: 14; 40-60 years old: 16
Title	Professors:4: MA:20: Résidents: 6
Degree	DESM: 4; DEMS: 20; Généralistes: 6
Function/Post	Médecin-chef (Head of the service): 4; professors: 4 (1 is also research co-ordinator); University lecturers of medicine and résidents: 22.
Speciality	11 paediatrics; 8 internal medicine; 4 infectious diseases; 7 biochemistry and human anatomy.

4.6.2 Reliability

The researcher was aware that there were questions of prestige inherent in this set of questions. Clearly members of a community who have to read, write, speak and understand English to rise to the top of their profession in the present environment might perhaps have felt the need to exaggerate their level of competence in written replies. The researcher was able to introduce corrective mechanisms into the process, since she also conducted interviews to corroborate the information. She was also the English teacher for many of them and the person who provided on the spot translation for many documents. The respondents were therefore less likely to answer inaccurately than they might have done in a more formal environment with a researcher who did not have intimate knowledge of their skills..

4. 7 Formal interviews

Another method of collection of data was a set of formal as well as informal interviews (see format on appendix two) with 13 subjects.

4.7.1 Representative nature of interviewees

These 13 interviewees were chosen as representative of paediatricians, particularly of those who were trying to progress to docent and to enter the IRC. Swales (1995) refers to those as members of a 'Discourse Community Pressure' (DCP). The population consisted of two Professors (male), five MA (2 females and 3 males) and six résidents (1 female and 4 males). The choice aimed at achieving with the subjects representing different levels of the hierarchy. Were they to agree on the facts, then this could be seen as validation of the data since they would of necessity have different viewpoints from these different positions.

4.7.2 Reliability

The researcher was also aware that as she was the teacher of English and a friend of some informants, they might tend to give answers to interview questions to please her. This was borne in mind. This is the paradox: where a researcher is within the community there are certain distortions; where a researcher comes from outside the community there will be other distortions.

All the interviews were conducted by the researcher herself, recorded and then transcribed at a later date with the permission of the interviewees. The presence of a tape recorder did not appear to pose any problem. As the participants became deeply engaged in the discussion, they seemed to forget about it. The informal interviews were in–depth, opened and unstructured. They lasted about one and one-and-half hour (1 hour being the norm) which seemed 'long enough for interviewees to develop their subject and short enough for critical awareness not to lapse' as Wright (1992; citing Measor 1985) argues. It was conducted mostly in French but Algerian Arabic expressions were used all along the conversation for specific use such as telling a joke, swearing, eliciting, convincing or for any other expression related to local culture or religion. To comply with the interviewees' requests, only false names have been assigned to protect their anonymity.

The interviews took place mainly in the respondents' offices to the exception of one

interview which at an evening meal in the researcher's home, in a very relaxed atmosphere. They all took place between 1993 and 1995. Three MA doctors (1 female and 2 males) and one professor (male) were interviewed separately, one other professor and an MA doctor (male and female respectively) together during the meal and all the résidents were questioned in a very friendly and conversational manner in their study room. It was advised that

> Basically, interviews must be conducted so that consultants are put at ease. This means that the investigator must conform to the consultants' culture. If members of the culture are most comfortable talking in competition with peers, then that is how the interview has to be conducted (Chaika,1982:23).

This is to illustrate the point about interviewing the residents in a group rather than individually. This particular group was very responsive and eager to relate their experiences.

Open-ended and unstructured type of interviews were chosen for understanding the social network established within the studied DC. The questions were mainly designed on the basis of the conceptual framework formulated in chapter 2. The respondents were encouraged to give their own definitions of their roles, activities and positions at the clinic. This technique has also facilitated the raising of further questions according to the pertinence of the answers given.

The purpose of the questions were meant to reveal two levels of truth; explicit and implicit. The first level addressed open issues such as the role, frequency and relevance of English use in the medical community. The second, touched upon the constraints encountered by the concerned members to fulfil their purposes or join their target community; namely presence of gatekeepers, existence/non-existence of 2 ways system in the interaction.

4. 8 Analysis of public discourse

Finally the last two minor parts of the methodology were observation and taping of a medical conference and use of think aloud techniques within the classroom (see transcription of the interview on appendix three). These were used only to provide further

illustration for points already found in the questionnaires and interviews. The conference demonstrated the use of English in the IRC in an Algerian setting. Some conference speakers referred to it explicitly as a necessity for Algerian scientists. It cannot be used in any more than an illustrative way since it was simply one occasion.

4.9 Conclusion

And in conclusion and as a summary for this chapter we might repeat the basic thesis: the Algerian medical community is a subset of the International research community (IRC). This research is to find out if this DC is functioning efficiently. If it is, there will be exchange of information and feedback within the group, with new ideas circulating. The complexity of the language environment will not have blocked communication.

CHAPTER 5

PRESENTATION OF THE RESEARCH FINDINGS

5.1 Introduction

The research findings chapter comprises a report on the data collected from the doctors' in-depth interviews and from questionnaires given to a sample of doctors, from observations in formal and informal settings such as surgeries, administration offices, library, in the courtyard of the clinic and in conferences, mainly 'Forum du JAM' (Journal Algérien de Médecine) which took place on 19/05/93 and was recorded on a video tape. The evidence displayed from the spoken data will be marked as follows, for example, (DR1/MA/93) which indicates that the sample is from doctor number one to be interviewed. The numbers are given instead of names in random and do not reflect any sequence of passage in the interview. MA shows that the respondent/interviewee is qualified as a maître-assistant (registrar). 'RES' refers to résident (Senior in-house officer) and 'Prof' to Professor (consultant). The date refers to the date of interview.

As stated in the summary of this dissertation and thoroughly described in chapter 4, the group studied is the medical faculty of the university-hospital in Constantine, which may stand as a microcosm for the macrocosm of the whole of the Algerian research community.

This investigation constitutes a first step to test the hypotheses stated in chapters 1 and 4 presenting the following assumptions: "the scientific community in Algeria is handicapped by the complex language situation in which it finds itself and in particular has difficulty participating in the international research community. Doctors' inability to use English thus affects their competence and efficiency. As a consequence, it may also affect the health of the population".

The testing of this hypothesis presents itself in the form of two key questions that are already posed in chapter 4:

- In which language does information enter the Algerian medical community? What are the media and modes of exchange?
- In which language does information circulate within the Algerian medical community? What are the media and modes of exchange?

The following sub-questions are asked to shed more light on the way we will categorise our data. These are broken down as follows:

- Is medical literature written in English essential to the doctors' work?
- Can they get relevant and up-to-date information from sources in other languages?
- What languages do they use for discussion of new research published in English?

The research will then seek to ascertain how the subjects communicate their own work to the wider community;

- In which language do they contribute to research journals and participate in scientific conferences?
- Do they feel that they are blocked in any part of their work by the language medium that they have to use?

In general we will seek to establish the effect of needing to use English on the efficiency of the doctors' work.

The organisation of these findings is structured according to three main variables, use, frequency and relevance. The researcher first looks at these variables on a large scale by means of the questionnaire to quantify this evidence. She then used interviews and observations to flesh out the findings.

5.2 Use, Frequency and Relevance of English in the Algerian medical community

This section of the analysis particularly explores the difficulties of working in a multilingual world. As already mentioned throughout this dissertation, the linguistic

situation of Algeria is very complex. The language in use is perceived as a facilitator/gateway or a gatekeeper by the community members, this was stated by one professor in medicine during the conference which was recorded:

> Le problème des langues dominantes se pose chez nous avec acuité. Il se pose non seulement dans l'ES (Enseignement supérieur) et on connaît les débats que nous avons sur l'école en ce moment, mais il se pose aussi, en fait, pour l'accès à la recherche médicale et aux connaissances de haut niveau ……
> c'est l'anglais qui est dominant et que nous sommes branchés sur le système français… il y a donc une problématique spécifique à cette langue.
> Nous sommes interpellés sur la langue nationale qui est l'arabe, nous savons que la langue dominante des sciences médicales comme de toutes les sciences c'est l'anglais car c'est le lieu où se produit le savoir en majorité, et nous savons aussi que nous avons intérêt à agir avec la langue française. (Prof. Aberkane/conf/93)

The above quote gives us a clear picture of the language role in the academic/scientific environment in Algeria. This suggests that one has to be aware of the complexity and acquire the strategies to act skilfully and efficiently with the use of these three languages.

Answers to the questionnaire illustrate the members' choice of language medium according to their competence, their purpose and the availability of information in the relevant languages. In addition, their perceptions are taken into consideration regarding the importance of English within their own frames of reference.

5.2.1 Use of languages

To the question: Do you read medical books/ articles in English or French or Arabic? 93.3% use both English and French and 6.7% use only French. None of the informants used Arabic at all, and none used English exclusively or combined with Arabic to fulfil their purposes within their discourse community.

5.2.2 The relevance and necessity of English medium information

Some of the comments explain the subjects' perceptions for English use in their community. Most of these reasons are linked to the fact that the best and most recent medical literature is published in English. The subjects have the perception that the IRC

(International Research Community) generally would agree with this. Professor Colonna, one of the guests to the JAM conference who presented a talk on 'La Recherche Médicale et l'Information Scientifique en Algérie', claims:

> Je signale que les meilleures [revues générales], à mon sens et au sens de plusieurs enseignants, ce sont celles qui apparaissent dans le Lancet et le New England Journal of Medicine (NEJM) (Prof. Colonna/conf/93)

In addition to this conference speaker, also other members of the target community (Professors, mainly) cited journals such as NEJM, Lancet and BMJ (British Medical Journal) as being the most valuable sources of information for members starting medical research. The inevitable condition to gain access to the input of these journals is that its users are required to make an effort to read in English.

> Les articles publiés dans ces éditoriaux (NEJM, Lancet, BMJ, etc.) ... leur politique est différente; demande aux auteurs de faire une mise au point très brève sur un sujet. C'est une mine de renseignement parce qu'il y a une bibliographie d'une quinzaine ou vingtaine de références à la fin de ces éditoriaux ... facile à lire en faisant un effort de lire en anglais. (Prof. Colonna/conf/93)

However, the junior members also show that they are gaining awareness of the necessity of being able to read in English. Results from the questionnaires as well as interviews revealed developing attitudes. When they (résidents) were asked on their medium of accessing information some replied that:

> En français elle est pleinement satisfaisante (DR1/RES/94)

But others objected to this, putting forward the view that even the French were using English extensively. In the words of one interviewee among the neophytes:

> Je regrette DR1, les Français eux-mêmes sont en retard. Regarde leurs références, la majorité est en anglais (DR2/RES/94)

The third neophyte further supported this view out of his own experience by comparing the effect it has on his decision to choose the right treatment for his patients based on information

French articles or English:

> Elle (referring to the médecin-chef in his clinic) m'a donné le Journal Pédiatrique en anglais et elle m'a donné le traitement, magnifique, magnifique! Alors que sur la revue PRAD ainsi que l'EMC (français) c'est vide, carrément vide! Un médecin digne d'être appelé médecin n'aura jamais le courage de donner ce traitement qui existe sur l'EMC ou l'autre (D3/RES/94).

Mature members are very aware that the English language acts as a gate keeper, an exclusionary device. In the words of one interviewee:

> Tout ce qui sort actuellement comme article, sort en anglais. Je te donne comme preuve; des médecins français écrivent en anglais. Tu prends, par exemple, les grands cardiologues français, ils écrivent tous en anglais, et pas en français, rien qu'en anglais. Toutes nos références sont en anglais: New England, Lancet,... le niveau n'est pas très haut, il est ancien, très ancien, multidisciplinaire, plus populaire, très interdit...
> Oui, c'est vrai, si tu ne connais pas l'anglais, tu ne peux pas aller au delà de l'assistant, c'est impossible! (Dr12/Prof/94)

5.2.3 Frequency of English

Once the medical doctors answered positively to the necessity of the use of English in their profession, they were asked how frequently they used it. Such a question raises two types of problems: (i) the 'frequency' is compared with the frequency of need in French or Arabic, and (ii) if the answer displays a low frequency, does it imply that it contradicts the previous question (of use) or does it rather not underline the dilemma within each doctor, who has identified the fundamental need for English but is yet unable to use it more frequently because of his/her limited knowledge of the language.

The results displayed in figure 5.1 suggest that they either sometimes (40%) or often (40%) read in English but very often in French (53%). Only 13% of the informants confessed to reading very rarely in English.

	5.1(a) English	5.1(b) French
Very rarely	13%	0%
Sometimes	40%	7%
Often	40%	40%
Very often	7%	53%

(N= 30)
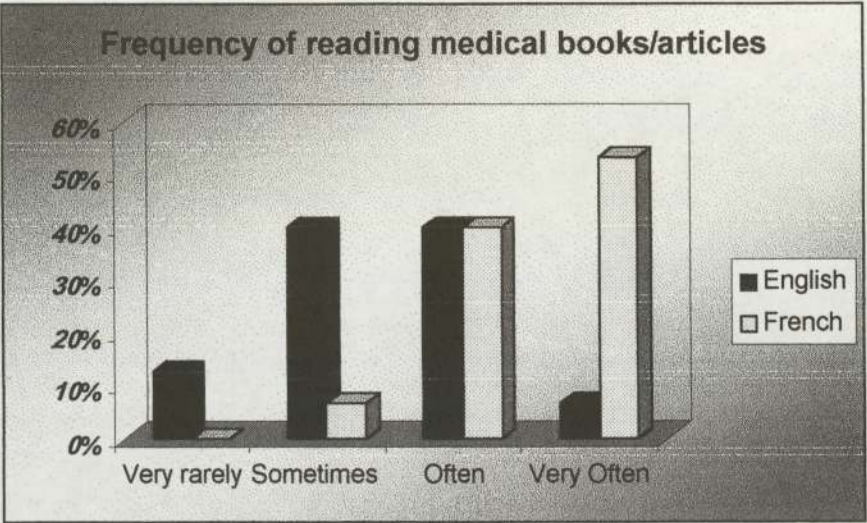
Figure 5.1: Frequency of reading medical books/articles among Algerian doctors

5.2.4 Comparative Relevance of French and English

It is interesting at this stage to find out more about these particular members' positions and roles as well as the reasons for less use of English than the answer to 5.2.2 might indicate to fulfill their purposes in the community. Section 5.2.1 displayed some contradicting views on the need for English to access information, from the neophytes' perceptions. The meaning of such a variable in the analysis lies in the place English holds for every doctor, neophyte or mature. From the initial in-depth interviews the following comments suggest that English is perceived as a pre-requisite for membership:

> Essentiel! essentiel pour faire un travail de recherche (DR6/MA/95)
>
> c'est-à-dire l'anglais me sert... parce que toutes mes références sont anglaises, toutes... (DR7/MA/94)
>
> Ah oui, c'est un instrument de travail très important!.... (Dr8/MA/94)
>
> L'anglais chez nous est indispensable, c'est indispensable c'est tout! à tel point que dans les années a venir, s'il faut s'améliorer, on ne fera que de l'anglais, mais pas comme celui qu'on a fait jusqu'ici. Il faut de l'anglais technique, et il faut qu'on en fasse beaucoup! (Dr12/Prof/94)
>
> Ecoute, l'anglais est indispensable! On ne peut pas prétendre être un hospitalo-universitaire sans connaître l'anglais, c'est impossible! Tous les gens qui ont fait autre chose ont dû l'apprendre pour pouvoir au moins lire un article (Dr13/MA/95)

The following respondent sums up both variables of frequency and relevance as follows:

> Et je suis beaucoup plus portée sur les articles en anglais que sur les articles en français, parce que souvent les articles en langue française ne sont que des traductions des articles écrits en anglais, alors je préfère me référer directement à l'original, à la source, c'est comme l'histoire du Coran en arabe, c'est pas comme celui qui est traduit, pourquoi? Parce qu'il y a des nuances, des termes, et ça dépend de l'auteur comment il interprète ça (DR8/MA/94)

The medical community, regardless of the level of qualification (e.g. résidents, maîtres-assistants, docents, professors) overwhelmingly supports the view that English is absolutely necessary in their discipline.

From the answers given, there was a consensus on a common factor: English is important for the medical profession. To what extent such importance has the same or conflicting meaning to all doctors interviewed is the main concern of this section. The general picture drawn out of the answers seems to indicate different weight attached to the use of English.

When starting to consider the features and motives in using English within the medical community of paediatricians, an initial distinction begins to emerge within the medical community. As the interviews took place, the researcher gained the impression that informants belong to different communities or sub-communities depending on the work they are doing at the time. On one hand, there is the **operational community** where the members' purpose is to monitor the patient's state of health and in which case the use of

French language to access any information serving this purpose is largely satisfactory. On the other hand, there is a **research community** where the members' main purpose is an attempt to join in the International Research Community, i.e. by publishing papers, attending or participating as speakers in conferences, etc., or simply to accomplish their doctoral degree in medicine and in which case English is indispensable as a reference language. Members seem to belong to different communities at the same time (Swales, 1990; Saville-Troike, 1994; Bollinger, 1973)

To fulfil the second purpose, the results obtained do demonstrate that 90% of the informants' reading is achieved through the medium of English. Comments such as the following illustrate attitudes clearly:

> Elle (la documentation en langue anglaise) est consultée. Pourquoi? Parce que plus de la moitié, peut-être même les 2/3, de la documentation que nous possédons est en anglais. (DR 11/Prof/95)
> ...Pour des sujets, par exemple, comme pour ma thèse, on lit plus en anglais qu'en français, je peux dire 4/5 c'est en anglais.
> ...pour la pédiatrie, pour les malades qu'on a dans le service, là on lit en français..... en réalité les gens lisent plus en français, ça dépend du repère qu'on se fixe. (Dr5/MA/med.-chef/94)

The following interviewee gives further explanation for the link between the use of English and research.

> Pour un travail de recherche, vous êtes obligé de regrouper le maximum de documentation, de bibliographie... donc ce que vous avez en français est vraiment insuffisant, obligatoirement... se référer à des documentations anglaises ou américaines. (Dr8/MA/94)
> ...si on veut vérifier quelque chose sur place, rapidement, c'est généralement sur un livre de référence, par exemple, en hemato- ou gastro-entérologie, sur un article de l'EMC, ils sont tous en français. (Dr5/MA/med.chef/94)
> Consultez-vous d'autres documentations quand vous êtes en train d'examiner un malade? (researcher)
> Oui, oui. La documentation c'est notre outil de travail... mais en français... surtout les posologies, les protocoles... (DR6/MA/95)

The following perception by one of the members in this DC suggests that the use of English is closely linked to the members' status in that community.

> ...jusqu'à un certain stade, il (doctor) peut carrément s'en passer de l'anglais, par

exemple le résident.... Dés qu'il commence a faire son doctorat, là il commence à toucher de l'anglais et sérieusement.... et plus même en tant que Docent et professeur, etc. (DR11/Prof/95)

Participation in the IRC collocates strongly with the use of English language as the medium of communication as stated in here:

C'est le stade de la communication... et actuellement, à l'état international, du moins dans les relations internationales concernant la médecine, ça se fait en anglais. (DR7/MA/94)

Similar comments were made by the following respondent but then there is a shared awareness that lower ranked members should also make use of this medium to access information as this will help develop their performance at the clinic:

Quand c'est la formation de base, il n'y a pas de problème, tu peux avoir une formation moyenne en étant francophone, mais au-delà d'un certain niveau, que je dis maître-assistant, peut-être avant, attention... Je crois qu'en tant que Résident, si on veut avoir un niveau plus performant, il faut faire de l'anglais. (DR12/prof/94)

The implication that follows this quote is that the 'formation de base' basic training which could be achieved with the use of French, might be at the level of medical students rather than résidents as perceived by the above respondent.

There is also evidence that there are doctors who look at English as relevant only in relation to the accomplishment of their theses. In such a case English becomes instrumental in achieving a pass degree role (These members of the medical community tend to be those who do not come back to English classes after their viva). This is illustrated by the following remarks from one of the respondents

Non, tu n'as pas remarqué que ceux qui ne venaient plus étaient ceux qui avaient fini d'écrire leur thèse et avaient soutenu. On avait l'impression que ceux là ne voulaient l'anglais que pour les aider à soutenir leur thèse, ensuite ils s'en sont désintéressés, c'est ridicule! (DR8/MA/94)

Others look at English as the medium to communicate and exchange scientific/medical information, regardless of the national boundaries. English is here the medium to reach

international recognition. English is also the source for updating knowledge, a role which can no longer be played by French. In this case, English helps competence and of course leads to higher medical qualifications.

The results displayed in figures 5.2(a, b), 5.3(a, b), and 5.4(a, b) do suggest different degrees of importance of use of French and English in these sub-communities.

Figure 5.2 Relevance of English and French scientific texts to the research of Algerian doctors

Fig. 5.2(a) in English		Fig. 5.2(b) in French
Not relevant	0%	0%
Somewhat relevant	7%	7%
Important	7%	53%
Essential	86%	40%
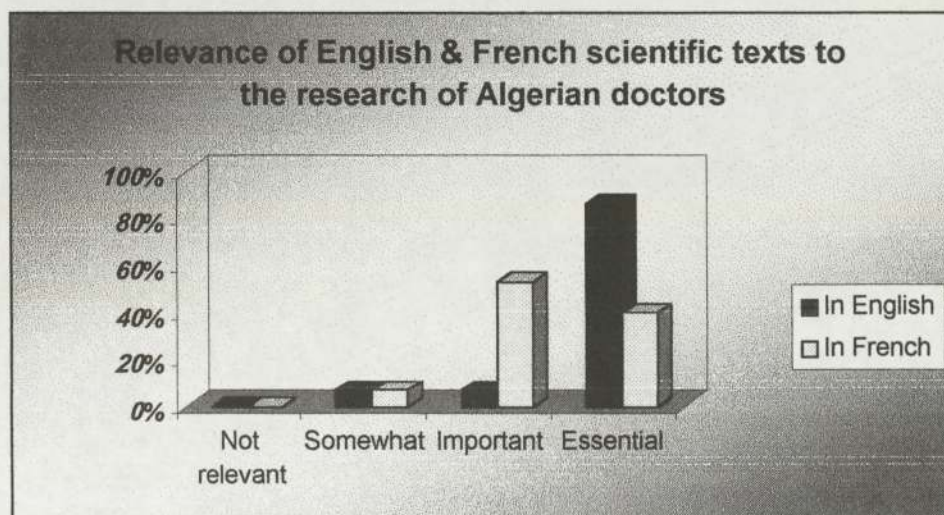
The results reported in figure 5.2 suggest that the large majority of respondents regard the literature in English as important or essential.

Figure 5.3: Relevance of English and French scientific texts to the clinical work of Algerian doctors

Fig. 5.3(a) in English		Fig. 5.3(b) in French
Not relevant	0%	0%
Somewhat relevant	27%	0%
Important	20%	27%
Essential	53%	73%

The above figures are illustrated in the following chart:
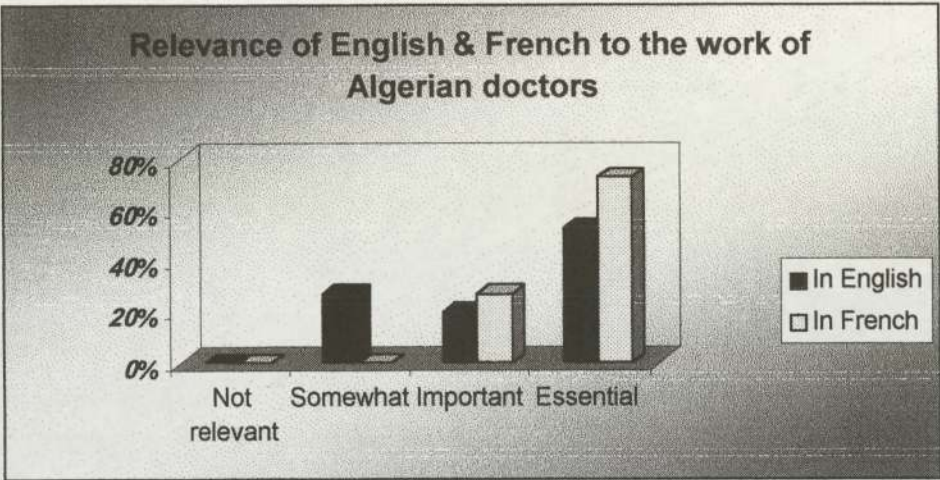
Figure 5.4 Relevance of English and French scientific texts to the teaching of Algerian doctors

Fig. 5.4(a) in English		Fig. 5.4(b) in French
Not relevant	7%	0%
Somewhat relevant	20%	0%
Important	40%	20%
Essential	33%	80%
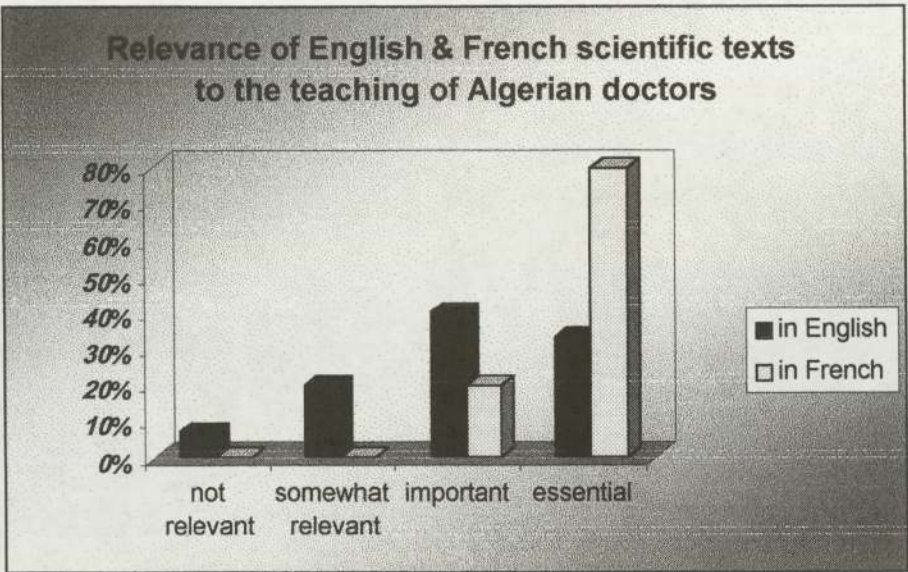
According to these figures there is a strong belief that English is much more important for the research community than it is for either the teaching or clinical work community. For the latter French is more favoured. These results have led the researcher to formulate the following questions:

- Why does a choice of a language (French or English) split up the Algerian medical community into different sub-communities?

- What are the reasons or needs for choosing one particular language in one particular sub-community and not in another? (although the members' activities are all inter-related and part of their daily routine).

- What are the communicative events that involve the research community and do not involve the other two communities, and vice-versa?
- What is the effect of such distinction of language use on each community?
- Could members of those sub-communities carry on effectively in both the clinical and the teaching community through French only?

5.3 Use of French in the community

The research identified when, where and why the different languages were used. French is used in the DC for an operational and teaching function. The researcher looked at the different communicative events the members employ in this discourse community such as speech events or written medical genres and sub-genres and the means of intercommunicating. (See chapter 2). Findings from the questionnaires and the in-depth interviews, suggest that this language is entirely sufficient in the following communicative events:

5.3.1 The daily business speech-events

Doctor-patient speech events (sometimes Arabic is used, in which case this will be determined by the patient and the doctor has to switch accordingly).

Colleague-colleague, colleague-professor, professor-student speech events; the mechanisms of intercommunication to achieve these speech events are through tutorials, lectures, case reports, meetings referred to as 'colloques' that take place every morning, any internal or external phone calls, any kind of correspondence with local or foreign members of a medical community (mainly from francophone countries), appointments, day practice in the service, medical consultations etc. The common characteristic of these speech events is that it involves the members of this community engaging in an exchange of information concerning their daily activities in the ward, it is in other words the daily routine or the domain of the daily business.

5.3.2 Research journals and other research genres

Reference speech events represent a crucial matter in this community of paediatricians as noticed above. It seems to be the one that distinguishes the mature members from the new-members (neophytes) of a discourse community, and also the one that causes the splitting up of the medical community into the sub-communities we identified above. These speech events are mainly the up-dated notes on any medical progress in the service referred to or known as 'mises à jour', the EMC (Encyclopédie Médico-Chirurgicale) which is a collection of different articles from different journals, the journal called 'PRAD' that represents the basic elements of medicine, 'le Journal de Pédiatrie', and the locally published journal called 'JAM' (Journal Algérien de Médecine), other different reference books on any micro-speciality in paediatrics, seminars or local paper presentations referred to as 'journées médicales' on paediatrics, for example, the medical protocols called 'les posologies' etc. These types of references constitute the basic source, sometimes the only one, for the medical students and résidents to help them prepare their exams for the degree of 'Médicine Générale' and the DEMS (Diplôme d'Enseignement Médical Supérieur) respectively. However, doctors in a higher position (members belonging to the IRC) do also make use of them. All these listed references are accessed in French. These are characterised of a basic level for either the neophytes or for quick reference in the service or the teaching work.

> Ça, c'est diffèrent... C'est diffèrent, par exemple, un résident, il a des questions précises, d'abord y a certains livres,. .... Il y a les mises à jour de l'encyclopédie médico-chirurgicale, c'est quand même un document de base et de références pour les études médicales... Donc, les gens travaillent là dessus. Et puis y a, par exemple, moi si je vois sur un article une question qui est au programme des résidents, je leur prête et ils font des photocopies... (DR5/MA/med.chef/94)

Although some mature members have frequently suggested that French was adequate for certain groups of neophytes, others challenge the view that not all French written information could be accessible to them. According to this 'médecin-chef' there exists a hierarchy in the use of certain genres written in French. She explains:

> .... Même les lectures en français, par exemple, je prends rien que la pédiatrie, y'a des revues de différents niveaux, y a des revues de pointes, et puis y a des revues qui sont, par exemple, du niveau de l'étudiant, de l'interne, y a des revues comme celles que je

t'ai montrées tout à l'heure par exemple, où il y a des articles qui sont de très bons niveaux pour un résident. Ça lui permet d'avoir une question bien travaillée, elle est prête à l'emploi. Il va la bosser, l'apprendre par cœur, l'écrire sur une fiche, l'écrire dans une chemise et la mettre de coté. Il aura sa question pour le DEMS. Il pourra rajouter une ou deux autres questions... Bon, y a des mises à jour ou des mises au point... (DR5/MA/med.chef/94)

Bon, et puis même en français, y a des revues, par exemple, qui sont d'un niveau plus élevé, plus sophistiqué, où on a des articles qui sont un peu plus pointus, et qui ne s'appliquent pas à tous les cas, c'est des cas un peu particuliers, c'est-à-dire que les connaissances de base sont acquises... (DR5/MA/med.chef/94)

When asked to give more precision on the purpose it sought to achieve such a kind of reference, she replied:

C'est plus que la spécialité... c'est des choses bien précises, fines, parfois c'est de la recherche moléculaire, parfois c'est de la biologie bien développée, parfois c'est des cas particuliers, parfois c'est des cas qui ne sont pas courants, un peu rares... Même en français y a une hiérarchie dans les revues (DR5/MA/med.chef/94).

In the discussion we shall analyse just what this attitude means for these younger members and how it may be an exclusionary device.

5.4 Use of English in the community

An earlier section of the findings has established that English is in use in the Algerian medical community. English is highly relevant to the work of the doctors and they perceive their competence or lack of competence in this language as a real problem, both for them personally and for their profession.

Now we will examine the data from the questionnaires and interviews which provide answers to the questions we asked in 4.3.2. and which illuminate aspects of the difficulties in the DC.

5.4.1   Is there a publicly set goal for the group to become more efficient in the use of English scientific texts in order to become a member of the International research community (IRC)?

The conference was organised by the key members of the institute of medical science (ISM) in Constantine. Information has been mentioned as a key to equipping the actors (i.e. individuals who play effectual roles) of the country, with the required skills to be able to participate efficiently and effectively in the world. The development of the country and the attainment of its goal depends on the efficiency of this information. Thus, regarding the place and importance of information and communication, Algerian authorities are expected to attend and encourage such an event. Interestingly the organisers of the JAM conference referred to the absence of any members from the Ministry of Health in this event. The key speaker in this conference remarks that he has been shocked at the ministry's failure to take the problem of access to information seriously:

> Le centre, Alger, doit assumer ses devoirs vis-à-vis du reste du pays ... et que les centres décisionnels, ministériels puissent suivre puissamment ce genre d'opération ... y a pas de représentants ici! Les gens n'ont pas répondu à notre invitation. C'est dramatique! Ça veut dire que le centre est loin de ces problèmes...(Prof Aberkane/Conf/93)

Another speaker in this conference Mme Ali-Khodja, head of information services in the ISM, also raised the same issue by making it clear that the community will not function efficiently without the government's involvement. She commented as follows:

> Science sans politique nationale ne pourrait avancer quelque soit les potentialités, les efforts et les motivations de la part des membres de cette communauté. (Mrs Ali-Khodja/Conf/93)

At a more individual level, one of the interviewee's experience regarding the teaching/learning of English during his secondary schooling demonstrates the inadequacies of providing the right human and material resources for this language. He comments as such:

> moi, mon problème... je n'ai pas eu de chance au lycée... Bon, je vous ai dit que j'ai fait allemand alors que j'ai fait anglais... mais on avait une dame très gentille et j'étais

excellent avec elle. En seconde on n'avait plus de prof d'anglais... la seule seconde sans anglais... Malheureusement, en 1ère même chose, pas d'anglais puisqu'on était scientifique les responsables considéraient cette matière comme n'ayant pas d'importance... Alors en Terminale, ils nous ont ramené un monsieur de l'université pour nous faire un peu d'anglais pour préparer le Bac. Je me rappelle ma note au Bac était 2/20... Ça n'a pas affecté d'ailleurs j'ai eu mon Bac avec la mention 'bien', donc pas de problème. Mais toujours est-il... ça m'a traumatisé (DR7/MA/94)

In this case the problem was clearly a local lack of resources and a failure within the school establishment to foresee that students of science would need English as an essential tool.

Other interviewees showed that the effects of the national language policies also had a deleterious effect on students' acquisition of the languages necessary for access to information. The ideological commitment to Arabic meant that the need to acquire literacy in this language crowded out adequate English instruction:

Non, maintenant ce n'est pas un traumatisme, c'est une paralysie... Et puis, quand on était étudiant, je me rappelais, on nous faisait de l'arabe, on faisait de la traduction en arabe. Si on avait fait de l'anglais, ça aurait été mieux quand même. C'était en arabe parce qu'ils prévoyaient qu'à l'avenir la médecine serait en arabe. Je vous dis encore que pour le concours du Docenat, bon, y as ta thèse bien sure qui compte 5 ou 6 points, tes titres et tes travaux, et tu as l'anglais... (DR6/MA/95)

Professor Aberkane insisted on the absolute necessity of access to information:

Documentation qui représente actuellement et représentera un objectif hautement stratégique pour notre pays. (Prof Aberkane/Conf/93)

He recognised the linguistic and cultural mediation that is necessary for this information to percolate through the community:

Le problème du rapport à la documentation, au livre, à la revue, à toute l'information scientifique, technique et médicale est un problème hautement culturel duquel dépend le développement de ce secteur, de ce secteur privilégié, de ce secteur clé de la santé et de l'enseignement supérieur (ES) et de secteurs stratégiques pour notre pays qui sont la première des sécurités du pays: la santé et l'enseignement. (Prof Aberkane/Conf/93)

There is widespread agreement with this among the interviewees that knowledge/information from English is directly relevant to the development of Algeria.

Thus in conclusion to this section we can state that interviewees were aware of the role of

English in technological advance. In addition to all the quotes already offered, there are many more in the transcripts of the interviews. Here are just three from mature members of this medical community:

> Oui, oui, aussi. Qui a fait la cardiologie? Ce sont les Américains. Donc, les Américains maintenant, par rapport aux Français, sont en avance de 15 ans. Alors les Français, pour se montrer entre eux, ils écrivent en anglais, c'est comme ça! D'ailleurs, maintenant, dans notre langage médical en français il existe de plus en plus de mots anglais, on dit par exemple le 'follow up', et très peu disent 'le suivi'... Ne pas connaître l'anglais, ce n'est pas possible! (DR11/prof/95)

> Il y a deux choses qui sont absolument, absolument indispensables pour la formation médicale universitaire de mon niveau: (a) c'est l'anglais, bien sur, en 1er lieu, et (b) les statistiques. (DR11 /prof/95)

> ... Et puis je me suis abonné auprès du CERIST, un centre d'informatique à Alger avec accès au Medline, aux banques de données, où on envoie des références de travail, et puis on a toute la documentation actuelle. C'est informatisé... c'est très bien, mais c'est en <u>anglais.</u> (DR7/MA/94)

Equally, neophytes perceive the significance and gravity of a lack of information in their community and link it to the effect it has on its development in the world or inability to compete internationally.

> Le problème de la documentation est très crucial dans toutes les universités algériennes. En général, il y a un manque. Les documents qui existent sont vieux, il n'y a pas de nouveaux titres. Par rapport à l'Europe on est en retard de 3 à 4 ans. (DR2/RES/94)

> c'est le problème encore de la documentation, tout ce qui est récent, tout ce qui à jour est en anglais (DR10/RES/95)

In an observation of the neophytes in their study room the researcher noticed that they were discussing the relevance of one particular article they were holding. One doctor explains:

> Voilà par exemple un article qu'un collègue m'a passé. Il a eu l'occasion d'aller en France. Regardez ! Toute sa bibliographie est en anglais. On y parle d'un médicament particulier qu'on a testé chez l'enfant. (DR1/RES/94)

Looking at the article it was noticed that although the article was written in French by a French scientist all the references were from English sources. He further explains that it is rather basic and was directed at medical students:

> Ce qu'il publie là est juste pour l'étudiant, il y a juste les grandes lignes, 3 ou 4 pages, ce n'est pas pour la recherche... mais la somme de ce travail, il faut voir! (DR2/RES/94)
>
> C'est une recherche en elle-même! (DR3/RES/94)
>
> Ça, c'est la culture scientifique (DR14RES/94).
>
> Vous allez voir les rîiésidents, chacun de nous va faire une photocopie et la cacher jalousement, il ne faut pas la perdre, il faut la lire et la relire... Au fait (*addressing to the friend who has brought the article*), n'oublie pas ma photocopie! (DR3/RES/94)

Thus the idea that only those at the pinnacle of the profession need English is clearly erroneous. All need access to work in English.

Among the community itself there is a clear grasp of the problem. It is, however, at the strategic level that awareness and action are missing as the lack of involvement of the Ministry of Health (owners who could stop the transformation of the members, in Checkland and Scholes' terms) and the failures of the education system seem to demonstrate.

5.4.2 Do the teaching structures help to develop more efficient modes of accessing the IRC?

There are two points to note before we move further: firstly there is a feeling among the mature members of the scientific community under study that the roles they are expected to play are onerous and, secondly among the neophytes that the structures for good teaching, learning and research are not really in place. The following quote given by one of the neophytes shows what would be the ideal teaching and learning situation. This, however, is not what happens in this clinic:

> Le but d'un prof. qui chapeaute tout cet enseignement, c'est de donner une ossature d'un cours. Il nous donne pas un cours de A à Z mais une ossature, et le reste du travail est un travail de recherche du résident... voilà, ça c'est le côté théorique, en principe on retourne après, on expose devant les collègues et on corrige le cours, et, en fin de compte, on aura des cours consistants car le prof. corrigera, rajoutera ce qui manque, etc. un cours d'avenir... et chaque fois qu'il y'a une nouveauté on la rajoutera

au cours... Et en même temps y'a le côté pratique, ce cours qui concerne une maladie donnée on va le voir en salle. Comme on a le cours (le côté théorique) on comprend mieux le malade, on le domine mieux en présence du prof. et donc on le traiterait mieux. Tout ça est donc très bénéfique et pour le médecin et pour le patient (l'enfant). (DR3/RES/94)

The neophytes are strongly aware of the consequences following the lack of guidance. They perceive a negative effect on the education process that should allow them to become efficient practitioners and then teachers and researchers in their turn.

Ça fait un travail énorme de la part de tout le monde. Malheureusement, chez nous, le côté théorique n'existe pas et donc le côté pratique est d'emblé foutu! ...puisque y'a pas de base... donc si on a une fausse idée, on pourra aller avec durant toute notre formation... s'il n'y a pas quelqu'un derrière nous, dire 'attention, vous êtes sur le mauvais chemin!' on peut rester sur le mauvais chemin et également je pourrais la passer à un résident de 1ère année (he is in fourth year) et il partira comme ça, personne ne le corrigera. (DR2/RES/94)

Unlike developed countries, the teaching structure in Algeria, and particularly in Constantine lies in the hands of the mature members who may put personal interest before the professional one. Neophytes explain how they have become the victims of this lack of direction:

Chez nous les Professeurs font la grève, pourquoi? Pour qu'on leur augmente les salaires. Ils choisissent les moments de grève durant la période des examens pour perturber les gens, pour chambouler... Quel est le motif de votre grève Messieurs? 'On est payé 3 millions, ça ne suffit pas, il nous faut 5 millions!'. Ou alors ils font du chantage: 'je ne travaille pas, je vais quitter, je vais ouvrir un cabinet'. (DR2/RES/94)

A Alger, par exemple, y'a plusieurs Professeurs en Pédiatrie, mais aucun ne se propose de venir travailler ici à Constantine. Aucun Algérois ne voudrait se sacrifier un peu et venir remplir le trou du Mansourah ou ailleurs. (DR4/RES/94)

On leur a proposé des villas, une bonne paie, aller à Constantine qui est à 400 km pour former des gens là-bas d'abord... mais personne ne veut. Leurs grèves n'expliquent jamais la cause des étudiants, leurs manques d'être pris en charge, non jamais de la vie... (DR3/RES/94)

Ils ne se sont jamais demandés pourquoi le résident est incompétent? Est-ce un manque de sérieux qui tuerait les enfants? Ils auront le droit de nous écarter. (DR1/RES/94)

We have established at some length the absolute need for English. These two quotes stress again the need for English competence in clinical work and in achieving qualifications.

> Un médecin se rend au service pour soigner un malade, mais le cas est complexe et il y a des risques de complication. Ici, quand je connais la langue, un article en anglais et mes contacts avec des écoles anglaises ou anglo-saxonnes me permettent de le soigner rapidement, et vous devrez attendre 6 ou 12 mois avant que cet article ne soit traduit en français. (DR3/RES/94)

And

> Le niveau moyen ou médiocre *(French)* c'est acceptable. Mais si tu veux faire comme tel ou un tel, comme moi j'ai fait, alors là tu es obligé d'éplucher car quand tu fais une thèse, quand tu arrives à écrire, il faut citer exactement toutes les références. Sur un article, par exemple, sur 20 références plus de 15 sont en anglais, et plus l'article est documenté en anglais, et plus il est solide, très souvent. Tout ce qui est solide est écrit en anglais, surtout dans mon domaine à moi. (DR12/prof/94)

However, the way for the neophytes to access the English language literature is with the help of the mature members and here there is the problem of recognition and reward of the people who should be the teachers and facilitators. The mature members who must teach in this DC, express extreme dissatisfaction. The most senior of the interviewees explained that the role of the mature members of the community in teaching the younger members has not ever been spelt out and is not rewarded:

> Dans les textes, on n'est même pas supposé encadrer les résidents, il faut un rang magistral, il faut un professeur pour encadrer les résidents, mais nous on fait fonction de ça... (DR5/MA/med.chef/94)

Then she gave further explanations on the exact role of an MA to help out neophytes of this medical hierarchy join the target community. This help is based on the practical side rather the theoretical:

> Bon, le maître-assistant, quand même apporte un plus au résident, il apporte une petite expérience supplémentaire, il oriente mieux le résident. Il discute avec lui. Dans la vie de tous les jours, le résident trouve un appui quand il est près d'un maître-assistant, mais il y a un travail personnel important..., le résident doit travailler ses questions tout seul.... (DR5/MA/med.chef/94)

> Mais le maître-assistant vient en aide, discute les malades, discute les cas, établit des

protocoles avec le résident... Il y a des maîtres-assistants qui ont un peu plus d'expérience dans certains domaines... (DR8/MA/94)

Oui, encadrer dans les visites, les examens des malades, on encadre en tant qu'assistants, aussi les internes, les externes. (DR7/MA/94)

Thus 'maîtres-assistants' rather than 'professeurs' are socialising the younger members into the medical community. They may not be fully proficient to do this. Certainly the language aspect may be one area of deficiency.

On the other side, similar dissatisfaction is also perceived and expressed by neophytes in the community:

Le maître-assistant est pédagogiquement incapable d'enseigner un résident. Un résident doit être enseigné par un prof. le MA enseigne l'externe, l'interne aussi.(DR2/RES/94)

According to this neophyte an MA is also a neophyte who is struggling to join the target community:

Le maître-assistant encadre en salle c'est tout et le résident doit être un satellite du MA.... mais en aucun cas un MA ne doit encadrer un résident parce que lui même il a besoin que les connaissances décomptent dans sa tête, qu'il voit plus clair, etc. ça veut rien dire 4 années de pédiatrie! on sort avec une foule connaissances... (DR10/RES/95)

Previously to this comment, some neophytes gave further details and evidence on the MAs' roles within the institution and how this could affect the effectiveness of their research community:

Ils (Les maîtres-assistants) se posent le même problème que nous, eux c'est l'encadrement... (DR2/RES/94)

Je vais vous donner l'exemple de notre Médecin Chef, elle est de bonne foi malgré qu'elle n'est que maître-assistante, elle fait la fonction d'un Professeur, et elle le fait, elle le fait avec des acrobaties. Un M.A., sans rentrer dans les détails et sa vie privée, il ne pourra jamais, à tout jamais, faire un travail scientifique de recherche pour la simple raison que lui il ressent d'autres problèmes d'ordre administratif, il encadre l'externe, il corrige les copies, il fait la surveillance, il visite le service pour voir qu'il

n'y a pas de problème d'hygiène, il doit contrôler les commises de salle, il doit contrôler l'infirmière et le résident.... on lui demande de faire un effort draconien, bien sûr, automatiquement, systématiquement il négligera facilement son côté recherche. (DR3/RES/94)

Ce n'est pas uniquement ça, il (le MA) confronte aussi un problème de documentation... (DR2/RES/94)

Pour en dire que lui aussi a besoin d'un prof. (DR4/RES/94)

To conclude this section we may say that no one at the three levels is satisfied with the teaching arrangements.

5.4.3 Do the hierarchical structures of the community block more efficient modes of accessing the IRC?

Since this is the framework in which we might expect English (for special purposes) to be learnt, used and improved, we must suspect this is not happening efficiently and effectively.

Against this background of discontent, are the mature members of the community helping the junior members access the information that comes from the IRC and which is necessary for their development? And if so, how?

Figure 5.5. below displays the role and function of each member according to their position at the hospital.
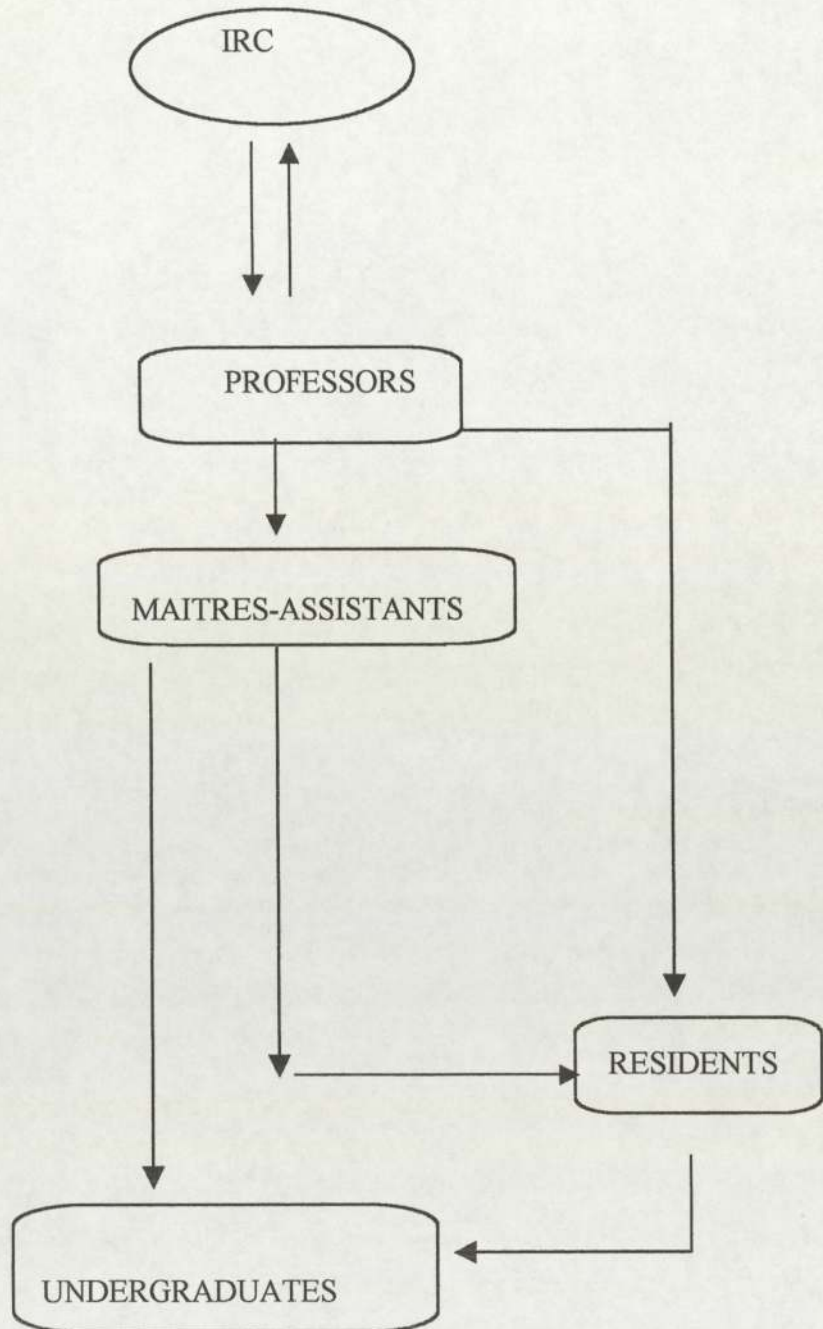
Figure 5.5. Status and hierarchy:
Role and Function of Medical Doctors

The upper levels (professors) have easier access to updated knowledge through their grade, their material benefits, their contacts through international conferences, workshops, scientific exchanges, etc.. This evidence has been gathered through our questionnaires which identified the members' active participation (see section 5.5.2) with the outside community. Only the professors in medicine were active.

In theory the professors are willing to improve the overall qualification of the lower levels; that is helping the maitres assistants and the résidents to join their discourse community, they are supposed to transmit without any reserve their knowledge. In turn, the next level should be motivated by his superior in grade and transmit his knowledge to the lower level and so on until the undergraduate level. However, we have already seen from the comments on the teaching structure that the intermediate grades are those who are having the greatest contact with the neophytes and the professional level has tended to remain aloof. This is reproduced in the research context. The following comments from the neophytes reveal what actually happens in the hierarchy with reference to the transmission of knowledge. There are fewer quotes here than on other subjects because it is culturally not acceptable to criticise one's superior in the Algerian situation. Thus the fact that there are any at all is important.

> Normalement l'examinateur c'est mon Professeur, il sait ce qu'il m'a donné comme information, je la lui rends (le feed-back), alors que nous, on consulte que des documents français, et on est en face d'un Professeur qui se documente peut-être en anglais, qui a connu une autre école, et je lui ramène mes informations... (DR9/RES/94)

> ... Elle (la communication) n'est pas retransmise. La retransmission de l'information dans la recherche scientifique est fondamentale.(DR1/RES/94)

> Oui. Il y a aussi un autre élément, on n'a pas de cours programmé par d'autres professeurs, c'est important. Le professeur me donne ces éléments de base, et ensuite c'est à moi d'aller lire et chercher, cela, on ne l'a pas. (DR10/RES/95)

> Parce qu'il y a un défaut dans l'enseignement ici, quand on fait la post-graduation, il faut se débrouiller seul, point à la ligne, c'est une réalité, je n'invente pas! (DR2/RES/94)

One of the interviewees avoids generalising the case to other disciplines:

Peut-être en médecine c'est tout, on ne sait pas ce qui se passe dans les autres filières. (DR1/RES/94)

The theoretical expertise is felt as an important impediment which might greatly affect the neophyte's ability to perform efficiently in the operational community:

Quand on commence une post-graduation ici en Algérie, et surtout ici à Constantine, c'est au résident de préparer tout seul: ses questions, de se débrouiller pour avoir le plus de documents possibles, de préparer tout seul. Personne ne vous donnera un gramme d'écrit. Probablement, lors d'une visite, vous êtes en face d'une difficulté. Je ne dirais pas que le médecin est incompétent ici, mais le malade pose un tel problème que je suis obligé de demander au Médecin Chef, à des amis, et d'autres collègues... Comment voulez-vous que je traite ce malade? Peut-être avec cette méthode, je comblerais ces lacunes, mais question enseignement. (DR1/RES/94)

L'enseignement est inexistant! (DR4/RES/95)

The following subjects explain their strategies to cope with the world of information despite the encountered constraints:

Dans notre enseignement, y'a le théorique et y'a le pratique. Sur le plan pratique ça va ,... on fait des malades avec les assistants. Pour la théorie.... DR3, par exemple, il va voir un cours de l'EMC et il va le résumer à sa manière... (DR2/RES/94)

...donc si on prend une question écrite et on la traite à 4; DR3 va insister plus sur la partie physiopathe, il va mettre un traitement qu'il a trouvé dans un tel ou tel article, DR2 va faire ça d'une autre manière, moi aussi... y a pas un prof. qui doit guider nos connaissances. (DR1/RES/94)

In this situation the higher levels have a kind of monopoly over the updated knowledge in the various areas. In addition, there is hardly any professional exchange of information with feedback between the neophytes and the members of the medical community of paediatricians.

As has been mentioned earlier on, although the résidents (in-house officers) take third or fourth place in the hierarchy after the professor, docents and maîtres-assistant, they undertake many responsibilities within this community in which case their role becomes crucial as well.

There is a certain amount of agreement among them that the scarce resource of information

does not circulate freely round the community. This is in part because of the linguistic constraints discussed above, but as the following excerpts from an interview show, a feeling of not being 'in the know' is also strong among the younger members:

> Voilà, en médecine il y a toujours du nouveau, et même tous les mois il existe des publications. Alors le fait de ne pas pouvoir avoir accès à tout cela et même de ne pas être au courant de nouvelles choses, comment le ressentez-vous? (researcher)
> Il faut dire qu'à 90% ça touche beaucoup le malade, théoriquement, mais, Dieu merci,... (DR3/ RES 94)
> Non, soyons francs, ça touche le médecin d'abord, parce que toi tu es au service du malade. (DR2/ RES 94)
> Bien sûr! (DR3/ RES /94)
> Oui ça nous touche. Les maladies évoluent, les thérapeutiques évoluent, et à chaque instant on prend du retard, nos méthodes de travail ici sont plutôt archaïques, on est frustré certes... (DR2/RES/94)
> Tu dis 'archaïque', est-ce que cela signifie manquer de moyens techniques ou bien ne pas savoir, ne pas être au courant de ça? (Researcher)
> Les 2 choses: un, parfois on n'est pas au courant et, deux on n'a pas les moyens. Finalement le médecin ici se sent continuellement frustré. (DR2/RES/94)
> Il en est de même pour le malade, non? (researcher)
> Le malade, en fin de compte, c'est le plus grand perdant dans cette histoire, il paie les pots cassés à cause de cette politique. (DR2/RES/94)

In anticipation of the next section the following quote shows that the junior members are thrown back on their own resources in order to get hold of the relevant literature. They have to 'get by' to be 'débrouillard ' in their terms.

> On arrive à avoir des documents très difficilement, mais on se débrouille seul pour avoir quelques fois des articles récents. Mais le fait que les moyens techniques n'existent pas, on ne peut pas appliquer les nouveaux traitements proposés, ils demeurent du domaine de la théorie pour nous, c'est tout! (DR10/RES/95)

Thus they are stuck at the level of acquiring resources; actually understanding them is a higher order problem and one which is also a difficulty as we have shown.

5.4.4 Do problems of resources block more efficient modes of accessing the IRC?

So it was becoming clear that the lack of resources exacerbates the language barrier. The problem is not simply the necessity of using the second foreign language to access documents, which is already a hurdle, but there is also the problem of actually acquiring

the resources. Algeria's economic position means that the latest information and knowledge is not readily available to all who need it.

The results from the questionnaires showed that the Algerian doctors represent their main source of information and through French medium mainly, 70% compared with 30% in English. 50% of this documentation is accessed in French via the national/local libraries in Algeria and also 50% in English via the international ones. The following chart (5.6) illustrates the different modes of communication from members of the Algerian DC.

Figure 5.6 Media of Information for Algerian Medical Doctors (in %)
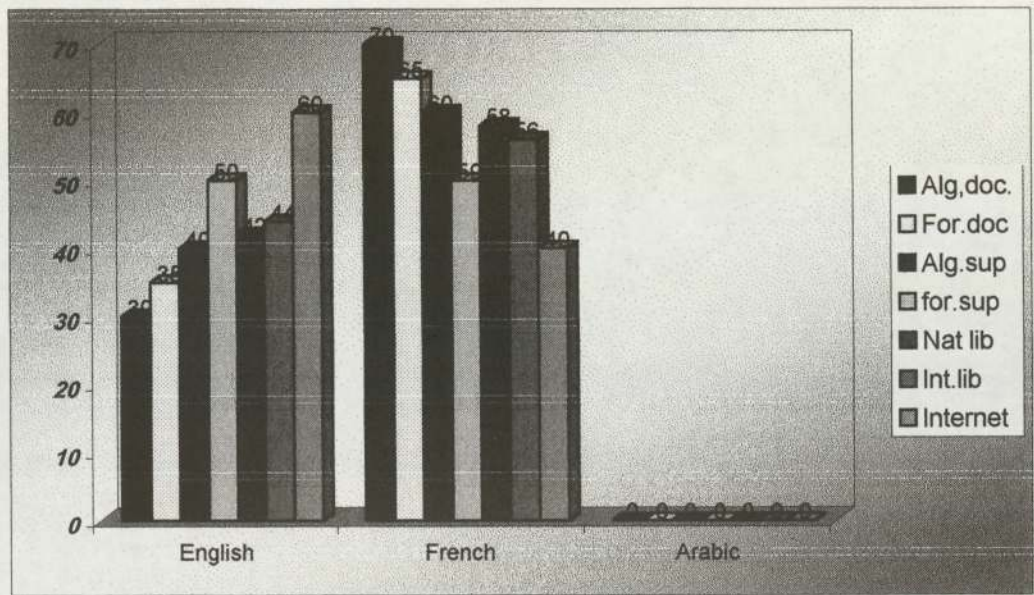
(Alg.doc.= Algerian doctors; For.doc.= Foreign doctors; Alg.sup= Algerian supervisors; For.sup= Foreign supervisors; Nat.lib= National libraries; Int.lib= International libraries)

The quotations which show that the dire financial situation of Algeria is at the heart of the problem are legion. It is clear that resource constraints are at least as important as linguistic, structural and hierarchical:

La question 'documentation' est très pénible! (DR11/Prof/95)

Some interviewees mentioned that provision of necessary reading material used to be possible in Algeria:

Y a quelques années, on pouvait faire des abonnements par le biais de la SNED (Société Nationale d'Edition et de Diffusion). De 1989 à maintenant y'a eu un gros trou. On ne trouvait plus de documents au niveau de la bibliothèque. (DR5/MA/med.chef/94)

Therefore, specific strategies are used to access the medical information. In-depth interviews revealed the other routes and efforts the members took to get the relevant knowledge for their discipline. They are either personal effort to physically get to the proper source or members had to build a special network of relations in order to obtain it. these respondents' cases illustrate this reality:

> … les articles, je les ai tous fait photocopier en général quand je suis partie en France, dans la bibliothèque … sur place (DR5/MA/med.chef/94)
> Si on connaît quelqu'un, si des fois on va à l'étranger, on fait des photocopies… au fait, on se débrouille! (DR8/MA/94)

Training outside Algeria has given to other members an opportunity to collect their documentation

> Mes informations? … c'est mon stage, le stage que j'ai fait en France. Il m'a permit de faire ma documentation, d'être à la page dans mon travail. (DR7/MA/94)

A few have recourse to relatives

> Mon frère qui est médecin en France m'envoie des articles sur la pédiatrie qui sont de top niveau! (DR9/RES/95)
> Mes collaborateurs, mon prof.- mon directeur de thèse également me donne de la documentation. (DR13/MA/95)

Other means based on charitable donations have also been exhausted so much there was thirst for information. This interviewee, making use of her position as a head of the paediatrics clinic said:

> Il nous est même arrivé à demander à des laboratoires pharmaceutiques étrangers, bien sûr! (DR5/MA/med.chef/94)

As she also took the risk of acting unlawfully, not requesting the authors' right to photocopy:

> D'abord y a certains livres, on fait des photocopies, même des <u>livres,</u> on n'a pas le droit, mais on le fait. (DR5/MA/med.chef/94)

The system of photocopying is perceived as the most reliable and accessible mode of collecting information for the neophytes. These are their strategies:

> Et bien il y a toujours des petits échappatoires, un collègue qui a un article nous le passe pour le photocopier (DR3/RES/94)
> Ici? On vit sur un système de photocopie (DR1/RES/94)

The following is a transcript of a group discussion which explored the subject. In general the members complained at the out of date nature of their sources:

> Le problème de la documentation est très crucial dans toutes les universités algériennes.   (DR2/ RES /94)
> En général, il y a un manque, les documents qui existent sont vieux, il n'y a pas de nouveaux titres. (Dr5/ RES /94)
> Donc, vous pouvez survivre scientifiquement avec ce système? Quel est l'impact de la documentation? (researcher)
> Ces moyens qui existent ici sont insuffisants parce que ces documents vieillissent rapidement. (DR2/ RES /94)
>
> On arrive à avoir des documents… très difficilement. Mais on se débrouille seul pour avoir quelques fois des articles récents. (DR10/RES/95)

Even though as we noted above the professors do have privileged access to material, they too report the difficulties that budgetary constraints place on them:

> Non, maintenant? Maintenant d'Est en Ouest, c'est le même malaise. Actuellement, il y a un grand problème lié à la documentation pour une raison très simple: c'est que nous, les médecins, sommes des grands consommateurs de documentation, et cela coûte beaucoup d'argent. Moi personnellement, mon budget de documentation est supérieur au budget de l'université toute entière. Mais, depuis la crise, on n'a plus de documentation, que ce soit en anglais, ou en allemand, ou… Il n'y a plus rien! Alors maintenant les gens ne lisent plus, il n'y a plus d'articles, et dans toute l'Algérie il n'y a plus rien qui arrive. (Dr 12/Prof/94)

In the conference similar comments were made and in addition the contraction of resources since independence was made explicit:

> La santé publique et l'enseignement supérieur sont 2 institutions qui traversent des étapes très difficiles de leurs développements pour des raisons multiples, y a différentes contraintes à une instabilité générale de la société, au bouleversement que nous subissons. On a vraiment le sentiment que la profusion de données, d'émission, de production du savoir, notre capacité de recevoir ce savoir est entrain de se dégrader par rapport aux premières années de l'indépendance. (Prof. Aberkane/conf/93)

5.4.5 Has there been a strategy to help members prepare their contribution to the IRC. (preparation for conferences, meetings, lectures, discussions, etc.)?

The difficulties of accessing information in English have been made very clear. The problems are exacerbated when it comes to productive language, as we would expect.

The interviewees all agreed that developing countries such as Algeria need their scientific class to enter the IRC both for the maintenance of Algeria's position in the world and for the scientists' own development. However, presenting and publishing papers in English represents an incredible hurdle for the doctors. At the scientific conference the main speakers reiterated this. Professor Aberkane exhorted the community as follows:

> Il va falloir donc s'attacher à <u>produire</u> et à <u>diffuser</u> l'information médicale. Pour ces deux termes nous sommes <u>déficitaires</u> (Prof Aberkane/conf/93)

So far the efforts to overcome this obstacle have centered on the creation of scientific journals within the country as he reported:

> Ce devoir de communication qui nous fait arriver à la création d'une revue scientifique du Journal Algérien de Médecine (JAM) s'intègre dans un devoir de communication plus général, dans l'information scientifique et technique d'une façon plus générale. (Prof Aberkane/conf/93)

The community is aware that it must publish or perish. However, this journal is French medium and so producing articles for it does not give practice for access to the wider

IRC. The lack of confidence that the doctors feel stems in part from their inability to practise. They were very clear that many did not have the full confidence to venture outside their narrow group:

> Nous, on peut tester une attitude sur le plan clinique seulement, le reste, rien, par exemple examens, radios, etc. Donc les gens préfèrent ne pas communiquer car s'ils le font ils risquent de se casser la 'gueule'... (DR1/RES/94)

> Pourquoi? Parce qu'ils présentent une étude qui est biaisée dès le départ, c'est-à-dire tronquée, incomplète, etc. car qu'on présente une étude sur un certain nombre de malades ayant reçu un médicament, il faut étudier l'aspect sur tous les plans, sur le plan clinique, biologique du médicament lui-même, comment le supporter à moyen et long terme, etc. Après tout le monde adaptera cette attitude parce qu'elle a donné des résultats satisfaisants. Et c'est pour cette raison que les gens se rétractent et font moins de communications car ils ne veulent pas passer pour des ridicules. (DR2/RES/94)

The criticism that surfaced in the discussion of access to knowledge was repeated in the context of research. The lack of guidance given to neophytes was castigated. The following remark came from a speaker at the conference, an external commentator who could be said to be at the top of the medical hierarchy in the IRC. He made it absolutely clear that a scientific community not up to date with developments in the area was failing.

> Une chose dont on ne se rend pas assez compte, peut-être à Constantine, est que la recherche documentaire est une nécessité absolue. J'ai rencontré un certain nombre d'étudiants et de maîtres-assistants qui soutenaient des thèses et qui arrivaient avec une idée sans être renseignés au préalable sur la manière dont le sujet aurait pu être traité. Quelles sont les idées des autres sur le même sujet est absolument nécessaire. (Prof. Colonna/conf/93)

5.4.5.1 Medical literature as a particular genre (or text-type) and the skill of reading

All the interviewees were aware that English is the most important mechanism to get them the assignment of membership to the IRC. They acknowledge the learning of this language as being a gateway to success. However, not all of them had the perception of Professor Aberkane who made it quite explicit that there were genre to be learned along with the general structures of English. The need for language competence was

competence in a particular domain:

> Il y a donc des questions universelles qui sont les lois de la science. La science impose ses règles propres de développement qu'il va falloir qu'on s'y soumette. Ce n'est pas un hasard si dans le dernier numéro du JAM nous avons mis en place et rediffusé largement, les règles devant être couvertes, le consensus devant être couvert sur la normalisation des modalités d'écriture, sur la communication. Les règles de la communication qui sont totalement ignorées par notre communauté …
> Pour se faire reconnaître au niveau international, c'est s'obliger à des règles, une discipline. (Prof Aberkane/conf/93)

The researcher was the interviewees' teacher and had insider knowledge of this area. She was preparing the neophytes to enter the discourse community. The acquisition of discourse strategies is a pre-requisite for membership of the TDC. They understood that they had to access the information in English. They understood that medicine is a discipline which has its laws and conventions for writing. They knew they must obtain information from journal articles. They knew that articles had either to be scrutinised and read in detail or just skipped and skimmed, dependent on their purposes.

However, the gap between awareness and practice is clear. English scientific texts are used very inefficiently. Responses from the questionnaires displayed that respondents perceive themselves as either medium speed readers (35%) or slow readers (45%) of their English language articles. The interviews and observations that focused on this linguistic impediment brought more evidence. First, the subjects displayed different rates of difficulties in comprehending these texts. Among them the consultants:

> Tout le monde se débrouille un peu sans avoir un niveau très élevé dans cette langue... (DR12/prof/94)

> Nos articles ne sont pas difficiles à lire, les termes ne sont pas très différents (*he means from French*), et les gens lisent. C'est vrai qu'ils ratent certaines choses, mais le sens général de l'article est compris, ils lisent pour se mettre au courant des nouvelles choses dans leur domaine... (DR12/prof/94)

> Vous savez, moi je suis très francophone, alors quand je lis l'anglais, ça me fatigue plus. Au début j'ai eu quelques problèmes, mais j'ai lu des centaines de pages. Après, je me suis mis à lire. J'étais obligé de lire. Il fallait que je lise tout ce qui a été dit dans un domaine précis, j'ai dû lire comme ça en anglais (*he showed a high pile*). Mais j'ai fini par tout comprendre, tout ce que ça voulait dire. (DR11/prof/94)

C'est-à-dire l'habitude dans... Disons que c'est stressant, c'est fatigant. Dans le temps je pouvais lire deux fois plus de français. (DR12/prof/94)

One level down the hierarchy and processes start changing regarding the input of this through the use of English. Some comments are perceived as if the interviewees are facing more difficulties or that understanding is more superficial. Probably less reading is being carried out at this stage:

À peine si j'arrive à comprendre le texte... Juste la compréhension du texte... (DR7/MA/94)

Est-ce que vous avez déjà essayé de lire en anglais malgré votre niveau dans cette langue? (researcher)

Oui, mais sans comprendre grand chose. Mais j'arrive quand même à lire un tout petit peu mais sans comprendre grand chose. Même avec le dictionnaire... je mets trop de temps pour éplucher et puis je vous assure que, c'est-à-dire moi, j'ai envie d'être autonome. (DR7/MA/94)

The situation at the next level down the hierarchy is linguistically more impeded:

L'anglais? Non, on lit pas! ...Du moment qu'on comprend pas! (DR4/RES/94)
Vous ne comprenez vraiment rien? (Researcher)
C'est-à-dire quelques mots.... (DR4/RES/94)
Le sens, le sens lui-même ne passe pas. (DR1/RES/94)
J'ai essayé une fois, j'ai même pas commencé (DR9/RES/95)
Moi, je vois je commence à lire... la première phrase je la comprend pas, je laisse tomber tout l'article. (DR4/RES/94)
Si, j'ai essayé fréquemment (de lire), j'ai toujours des difficultés. (DR2/RES/94)
Le problème se passe quand on a affaire à un problème tout à fait nouveau pour nous. C'est là où il y a le blocage; quand c'est une pathologie nouvelle, c'est le black-out! Personnellement, j'ai une personne qui m'aide à comprendre ça! C'est mon frère. (DR3/RES/94)
Tout le monde n'a pas cette chance! (DR4/RES/94)

Time is perceived as the biggest constraint in all their sub-communities and the link with their reading is posed as English requires more time to process and understand. In their attempt to be realistic and efficient in their work they content themselves with the easy side of the knowledge acquisition.

n'oublie pas qui dit formation, dit spécialité, je parle de pédiatrie qui... elle est assez courte, 4 ans ou 5 ans, mais les programmes sont assez chargés... le résident.... cherche tout le temps à avoir un article qui soit facile à assimiler pour gagner du temps afin de palier tout le programme (DR1/RES/94)

.

Un article écrit en anglais et avec une nouvelle pathologie ne prendra peut être 5 ou 6 heures ou plus... en langue française... 2 heures au maximum, le reste du temps sera dévoué à autre chose; je pourrai aller me perfectionner dans un autre domaine, dans une autre pathologie. (DR4/RES/94)

However, the strength of the Algerian doctors is that they understand the context in which they are and because the genre is familiar to them they can sometimes overcome the barrier of language. The following quotes illustrate their awareness of their ability to access the genre from their professional area:

Moi, quand je lis un article en anglais, je le comprends très très bien, mais si tu me donnes un mot, isolé de son contexte, je serais incapable de le traduire (DR13/MA/95)

There is an understanding that in some respects medical literature is more transparent to them with all their English language difficulties than to the non-specialist translators

Une traduction d'un article?... Tu perds un argent fou à aller voir X et Y, parce que quand tu lis un article, même si tu n'es pas très fort en anglais, et moi je ne suis pas particulièrement fort, je ne le parle pas, mais quand je lis un article, je comprends tout... Dans chaque langue, il y a une philosophie: quand tu lis un article en anglais, ce n'est pas comme on te le traduit, car il y a des choses derrière les lignes que le traducteur n'arrive pas à voir (DR12/Prof/94)

Moi j'irai plus loin, je te dirais que même entre médecins, moi je traduirais beaucoup mieux un article de ma spécialité qu'un article de sa spécialité parce que je connais plus d'éléments... (DR8/MA/94)

For those whose English is not at a level to permit them these strategies for accessing the medical genre these are the usual remedies:

...je demande la traduction et je n'ai pas eu beaucoup de chance. Toutes les traductrices sont des mères de familles avec très peu de temps. (DR7/MA/94)

But this is expensive and may be ineffective where the translators know English but are not competent within the genre.

Some perceive the use of a dictionary as being of great help:

> L'anglais ne me pose aucun problème! De temps en temps je bute contre un mot inconnu, et là je prends le dictionnaire. Même des choses très fines j'arrive à saisir... (DR8/MA/94)

Or for specific tasks such as citing a relevant quotation:

> quand on veut traduire cette référence en français, on prend le dictionnaire, parce qu'il ne s'agit pas de traduire n'importe quoi ... Donc s'aider d'un dictionnaire, ou s'aider d'une traduction mot à mot. Le dictionnaire on ne l'utilise que lorsqu'on veut reprendre cette référence intégralement, voilà (DR8/MA/94)

Which is not really a case perceived by others who spelt its inefficiency in the acquisition of the information:

> Bien sur que j'ai essayé, j'ai acheté un dictionnaire, d'ailleurs de France à 400 Francs... puis malheureusement, il me sert pas à grand chose... Bon, il y a des tournures de vocabulaire, des tournures de grammaire... parce que (DR7/MA/94)

The importance of purpose is also highlighted as an initiating factor for the members' task to selecting some articles, the number of times these are read as well the sequence of reading them.

Regarding the reading sequence, interviewees start with the Title and Abstract section

> Oui, oui, le titre et l'abstract aussi, bien sûr, le résumé, quoi! (DR5/MA/med.chef /94)

> Je m'appuie beaucoup sur le titre qui est vraiment important, le titre qui va donner une idée générale et précise sur le contenu de l'article, et je lis aussi l'abstract qui est très important. (DR13/MA/95)

> Tout ce qui est important dans un article; le titre, l'abstract, et puis la discussion. La discussion, je la lis et je la relis plusieurs fois. Elle est très très importante! (DR13/MA/95)

When asked on how reliable is a title to the researcher's selection of a specific article, the answer was:

> Il n'y a que les mauvais auteurs qui donnent un titre peu lié au contenu du texte. D'ailleurs, les meilleurs revues 'Neurology', 'Journal of New England', etc., n'acceptent pas les auteurs qui font des titres qui n'ont aucune relation avec le contenu. (DR8/MA/94)

One interviewee referred to an article which she showed as she spoke. The Abstract was that new information was presented to her in few lines:

> ...Y a l'abstract aussi qui est très important, un résumé de ce qui a été fait, les auteurs de cet article rapportent en 3 lignes une recherche, et déjà ils m'attirent dans la mesure où ils m'apprennent quelque chose de nouveau pour moi, car je ne savais pas qu'on pouvait faire des biopsies cardiaques, je ne pensais pas les technologies étaient si avancées qu'on pouvait enlever un bout du muscle cardiaque chez des patients encore vivants, ça! Je l'apprends! (DR8/MA/94)

This interviewee finds the reading of other sections just as important, depending on some topics

> Quand même, quand même, au moins la discussion, parfois matériel et méthode. Parfois on comprend mieux quand on a lu comment ils ont fait une étude, par exemple… ça dépend du thème. (DR13/MA/95)

'Topic' is further explained as such:

> Une étude épidémiologique, par exemple, quand on prend le matériel et la méthode on voit bien comment ils délimitent la population, par exemple. Et..., en ce qui concerne l'épidémio donc, c'est bien de lire au moins la méthode de travail pour voir la base de la population, comment elle a été choisie, sur combien de temps ils ont fait l'étude (DR13/MA/95)

Frequency of reading the same article as well as length of time spent reading that particular medical article depend on how relevant this article is to their research and also on the degree of its difficulty.

Bon, tous les articles ne se ressemblent pas. Il y a un article qu'on lit un peu plus vite..., ça dépend. (DR8/MA/94)

Ça dépend des articles, il y en a qu'on lit plusieurs fois, et d'autres une fois ou deux; ensuite on met l'idée principale sur un papier... Il y en a, par exemple, où on lit le résumé, la discussion, la conclusion. Il y en a où on lit le matériel et les méthodes..., ça dépend. (DR5/MA/med.chef/94)

Ça dépend, il y a des articles écrits dans un anglais un peu difficile... Et bien, on essaie de lire, de relire, de traduire, de voir l'idée principale... (DR6/MA/95)

Les articles en anglais on les lit et relit, Il faut les lire plusieurs fois, c'est très important. En médecine, quand on lit un article en langue française on le retient beaucoup mieux que lorsqu'on le lit en anglais. En anglais, il faut toujours souligner au feutre, avec des couleurs les faits saillants, les plus importants parce que quand on reprend cet article une deuxième fois on se réfère directement à ces mots, à ces termes, etc. (DR8/MA/94)

Special strategies are developed while reading English articles the purpose is to enhance understanding

Donc, tu trouves les articles en anglais sont toujours soulignés au feutre de couleur beaucoup plus que ceux en français... et puis la lecture, on n'en fait pas une seule mais plusieurs lectures. La première lecture est une lecture de déblayage. C'est une lecture qui va nous aider d'avoir une idée générale, ensuite on va lire en s'arrêtant... parce qu'à la première lecture, on lit globalement et on passe sur certains termes qui nous paraissent difficiles et sur lesquels on se heurte... souvent on n'a pas envie de prendre le dictionnaire et de voir... Donc on a une idée générale de chaque sens de la phrase... Après, dans un second temps, quand on veut fignoler... on veut rapporter, traduire, pour un travail de thèse ou un article qu'on veut publier soit même. (DR8/MA/94)

5.5 Is the community soft-shelled or hard-shelled? What is the density and multiplexity of the in-flow and out-flow of scientific texts within the community and between the sub-communities?

5.5.1 Within the community

The flow of communication within the community happens despite the problems noticed above. The neophytes explained the process:

Communiquer lors des journées médicales par exemple. On communique une théorie qu'on a appliquée sur des malades qui ont ensuite des attitudes thérapeutiques précises. On compare les résultats avec ceux obtenus quand la même méthode a été appliquée en France ou ailleurs. Comme ça on sait que cette nouvelle méthode est applicable ici aussi puisqu'elle est bénéfique! (DR3/RES/93)

Il reste aussi d'autres formes de communication aussi, les confrères, les Professeurs, etc. doivent publier leurs travaux, ils ont une riche expérience qui doit être exploitée localement, il ne faut pas uniquement chercher une documentation importée. (DR4/RES/93)

Another interviewee explained how information might be circulated. Co-operation between those that act as gate-keepers of this community and the neophytes is very important, one way of ensuring their community keep abreast of new techniques and drugs.

Justement pour un médecin toutes les informations scientifiques et médicales ne sont pas basées uniquement sur la documentation bien que ce problème soit énorme. Quand nous avons un malade au service, il nous arrive entre collègues de discuter d'un cas spécifique que quelqu'un a lu sur une revue. C'est là qu'on remarque alors l'intérêt de la documentation. Donc ici il faut soulever un autre problème qui est celui de la communication des connaissances acquises. Ceci est vrai pour n'importe quel domaine, mais je pense que c'est fondamentale en médecine, sinon, comme l'a dit DR2 tout à l'heure, c'est le malade qui paiera, malheureusement... (DR3/RES/94)

The circulation of information within the community is a vital mechanism providing the members have the right attitudes to exchange and also show modesty towards other members in times of conflict. This respondent insists on working professionally in a team:

On cherche, on recherche, on discute, bon... ça aussi ça dépend de l'attitude des gens, si on est scientifique, on est modeste, si on est modeste, on reconnaît qu'on se heurte à des obstacles, on ne connaît pas certaines choses. Donc, on demande l'avis des autres confrères, on en discute, on en envisage des diagnostiques... Donc, on recherche, on fait des bilans, on va aussi, justement, chercher dans les documents si on trouve quelque chose dessus. (DR13/MA/95)

The reasons for teamwork in this community are important to ensure the health of the young population:

Bien sûr! Ce sont des choses qu'on rencontre dans la vie de tous les jours. Tous les cas ne sont pas clairs, hein! Les malades ne viennent pas avec la solution de leurs problèmes écrite sur leur front... Pas du tout !.. On a des malades très difficiles, il y en

a qui sont ambigus, on ne sait pas si tel cas ou tel cas... Donc... Ça c'est la discussion qui se passe entre le résident et le maître-assistant, les confrontations... (DR5/MA/med.chef/94)

So there is a certain degree of soft-shelledness inside the national community, despite the remarks we made above concerning the lack of flow downwards from the top of hierarchy to the neophytes. There is clearly some top down information flow but certainly not as much as the members would like.

5.5.2 Between the community and the outside world

However, the difficulty of competing in the wider world was clear. First of all was the disadvantage felt by all countries with revenues which are severely constrained:

> Nous avons le sentiment que la science va plus vite que les hommes, particulièrement dans les pays en voie de développement, particulièrement chez nous. (Prof Aberkane/conf/93)

This was exacerbated by the instability that Algeria has experienced because of the political system. As has already been argued the system is interlocking and thus any unhealthy part of the system will cause negative effect on all parts of this system.

> L'ES rencontre maintenant des difficultés liées, encore une fois, à la stabilité et au progrès, et à l'acquisition, à la véritable guerre du savoir qui se déroule en ce moment. (Prof Aberkane/conf/93)

For example the instability of the present situation in Algeria has caused a flood of good doctors to leave:

> Je crois que vous avez bien suivi l'émission sur la fuite des cerveaux, les gens ont fuit parce qu'ils n'ont rien pu faire en Algérie, il y a des blocages un peu partout, d'ordre administratif, politique, etc., c'est la cause réelle. C'est tout simplement parce qu'on est un pays du Tiers Monde. Il faut changer les mentalités, il y a pas mal de choses. Ça ne suffit pas d'avoir de la bonne volonté en soi. Des volontaires pour une recherche scientifique, digne de ce nom, existent mais ils ne pourront jamais faire quelque chose parce qu'ils sont bloqués à tous les niveaux. Par exemple, il est souvent impossible d'avoir un simple appareil pour une recherche, et pourtant ces gens là font des miracles quant ils vont en Europe. Donc, le

problème est quelques fois humain et d'autres fois matériel, mais dans tous les cas il faut changer les mentalités... (DR2/RES/94)

The following comments show how, once again, the unhealthy system of the country given way to the loss of some of Algeria's eminent members who could have contributed to its development:

L'exemple du Professeur en radiologie et qui est Algérien, un maître-assistant qui a étudié ici, qui a végété quelques mois ici, comme ont végété nos aînés et comme on va végéter nous mêmes. On finira par faire de la santé publique, comme vient de le dire F., c'est une réalité, il faut le dire! (DR2/RES/94)

C'est une réalité, il ne faut pas avoir honte de le dire. (DR1/RES/94)

Oui, il est chargé de Chair de Résonances Magnétiques aux USA... et c'est un monsieur qui a beaucoup de brevets de recherche, et qui règle des problèmes de santé sur le plan mondial. Il soigne des princes, etc. (DR2/RES/94)

Il a mentionné lors de l'émission télévisée que l'université algérienne de médecine ne l'a jamais invité et n'a jamais fait appel à lui! (DR4/RES/94)

Alors que moi j'ai besoin de ses connaissances. (DR3/RES/94)

En plus, il s'est proposé de venir et pour rien... Pour résumer tout cela, le système de santé est pourri jusqu'à la moelle, et tout le monde est complice, du professeur jusqu'au dernier portier, parce que tout le monde s'en fou... Personne ne veut faire d'effort pour changer ça... pourquoi? Parce que les intérêts sont divergents, personne ne veut se sacrifier, et on végète... (DR2/RES/94)

Once again this reference to the developed countries is mentioned regarding the devotion of scientific members for their discipline:

En Europe et aux USA, pour arriver là, ils se sont sacrifiés, des Professeurs se sont sacrifiés pour la science, mais pas les nôtres. (DR1/RES/94)

And let us not forget that all this is taking place in a complex multilingual society.

À un congrès en Egypte, je devais communiquer dans la langue officielle, c'était l'anglais, mais ils ont dit que si vraiment vous n'arriviez pas à maîtriser cette langue alors vous pourriez utiliser l'arabe. Le malheur c'est que moi je ne maîtrise ni l'une ni l'autre, alors je leur ai fait un mélange entre l'anglais et l'arabe, mais je te jure qu'ils ont compris. Il y avait même des Français! (DR11/Prof/95)

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For these numerous reasons Algeria is only open to the outside world to a limited extent. We might say that the community is quite hard-shelled in terms of its relations with the IRC.

5.6. Are the doctors efficient actors, ensuring the health of the nation, or is there room for improvement through better access to information?

So we have shown the problems linking language difficulties to the difficulties in accessing the IRC. So to return to the clinical side of the doctors' role, do these linguistic difficulties have an effect in this area? The researcher suggested in the hypotheses that the micro problem of language competence might cause a macro problem of clinical incompetence because the doctors are blocked from knowledge. The language problem is not trivial and the authorities need to recognise this. The opening remarks in the conference recognised that language is a basic and common problem.

> Constantine organise cette journée parce que nous avons un devoir de communication qui ne concerne pas seulement les enseignants de médecine et les étudiants, premiers intéressés par ces problèmes de formation médicale, mais naturellement ils concernent toute la communauté, toute la société. (Prof Aberkane/Conf/93)

However, in an interview with the following subjects, the effect of English language use on the clinical community and the role it plays in the development of individuals was clearly expressed:

> Est-ce que l'anglais pourrait affecter la performance et la compétence du médecin, par exemple en ce qui concerne le diagnostique d'une maladie, etc.? (Researcher)

> Oui, mais ce que tu me dis là est une question piège parce qu'à partir du moment où quelqu'un peut lire des articles de qualité, cela a un retentissement direct sur son travail. (Dr12/prof/94)

> Tout à fait! Oui, c'est-à-dire l'anglais t'ouvre les portes de la connaissance fraîche, c'est-à-dire les grands chercheurs et les grandes découvertes viennent des pays anglo-saxons, ça on le sait très bien. Pour être à la page vraiment, il faut lire l'anglais, et puis... d'ailleurs le Medline. etc. Toutes les références bibliographiques sont en anglais... Dès qu'on commence à faire de la voltige, et qui fait voltige est compétent...

c'est tout à fait normal. (DR7/MA/94)

Plus on se spécialise, plus on est compétent. Oui, plus on suit les recherches pas à pas, plus on est compétent. (DR13/MA/95)

This other member denies that English might possibly affect or impede the doctors' clinical competence while admitting that lack of English blocks career advancement in comparison to those who manage to become members of the IRC. She expresses it as such:

La compétence? Non! La compétence n'est pas affectée. C'est pas vrai! Un bon médecin ne peut avoir lu qu'en français, et c'est pas pour autant qu'il soit un mauvais médecin, ce n'est pas vrai! Ça n'affecte pas vraiment la compétence. Mais, par exemple, on voit certaines choses qui sont publiées dans les revues anglo-saxonnes, elles sont un peu en avance par rapport à ce qui est publié dans les revues francophones, et donc si on ne les lit pas, on est un peu en décalage. Voilà! Ça! C'est vrai aussi. (DR1/MA/med.chef/93)

Here is another more direct link between up-to- date information, from English sources and its effect on the health of the nation:

Le travail de l'hospitalo-universitaire,... a normalement un travail d'équipe, il y a un thème, on fait le thème là et puis on fait la communication qui est belle et tout ce qu'on veut... et qui est instructive, surtout bénéfique pour la science, pour l'humanité parfois. Et cette découverte ou cette constatation clinique ou... alors il faut la publier. Alors pour la publier, il faut qu'elle soit admise par exemple, on écrit à un journal... tu fais ta publication soit en anglais avec un résumé en français, ou l'inverse, c'est en français, mais il y a l'abstract en anglais. (DR7/MA/94)

Both mature and neophytes display some frustration regarding their difficulties to access information

Voilà, en médecine il y a toujours du nouveau, et même tous les mois il existe des publications. Alors le fait de ne pas pouvoir avoir accès à tout cela et même de ne pas être au courant de nouvelles choses, comment le ressentez-vous? (researcher)

Il faut dire qu'à 90% ça touche beaucoup le malade, théoriquement, mais, Dieu merci... (D3:/RES/93)

Non, soyons francs, ça touche le médecin d'abord, parce que toi tu es au service du

malade. (D2/RES/93)

Bien sûr! (D3/RES/93)

Oui ça nous touche. Les maladies évoluent, les thérapeutiques évoluent, et à chaque instant on prend du retard, nos méthodes de travail ici sont plutôt archaïques, on est frustré certes... (D2/RES/93)

They perceive solutions to this crisis to be more active participation, better access to technology and greater critical mass:

comme tout est interactif, le développement universitaire et autres secteurs que ceux de la santé comme ceux de l'informatique, des nouvelles technologies de l'information vont nous permettre probablement de dépasser ce déficit de production et de diffusion dans notre pays. (Prof Aberkane/conf/93)

5.7 Conclusion

Participation in the IRC is perceived as the most important mechanism for development and progress. Professor Aberkane has clearly proposed:

Le problème est donc d'utiliser cette littérature grise, de savoir comment valoriser tout ce qui est littérature grise, tout ce qui est documentation scientifique et technique, technologique, les thèses, les mémoires, les articles, les publications, les livres, la production scientifique de façon générale dans notre pays.

Nous sommes plus interpellés que dans les sociétés développées parce que c'est un outil de développement absolument indispensable et qu'il va falloir gérer et stimuler.

Professor Aberkane continued:

Le problème va être donc pour nous d'essayer de suivre ces progrès de la science, d'assurer ce devoir de communication vis-à-vis des différentes communautés qui sont dans l'attente, de communiquer à l'intérieur de notre société et avec les sociétés développées, de ne pas lâcher le train, de ne pas quitter le train de la communication scientifique internationale, avec ses lois ses règles. (Prof Aberkane/conf/93)

Other members are also aware of this important factor as perceived by this one:

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> Je pense que dans les années à venir, ça va arriver... Oui, je crois. Non, je suis convaincue que ça va arriver d'abord, parce que les gens sont obligés... pour avoir des points, il faudrait qu'ils publient, donc ils vont le faire, y a pas de doute. (DR5/MA/med.chef/94)

The discourse community must keep an open network with internal and external members of its community participating effectively and efficiently to give it the dynamism that allows it to survive:

What is not yet clear is how this is actually to be achieved. But it is certainly true that: "Si on cherche l'efficacité, l'anglais est incontournable" as the head of the medical science institute (ISM) in Constantine made clear.

CHAPTER 6

DISCUSSION OF THE RESEARCH FINDINGS

I have found that, perhaps because of their intimate associations with life and death, the medical, the military, and the religious professions take education (and/or training) with a degree of seriousness seldom found elsewhere. They also possess the longest, most continuous traditions for operating formal programmes. Agriculture, seamanship, and hunting, though of equal or greater antiquity, were learned on a more informal basis. Therefore, all educators have much to learn from the first three. (Ripey, 1981; cited in Goodlad, 1984:161)

6.1 Introduction

Following the evidence presented in chapter 5, the present chapter will discuss and evaluate those findings.

Fishman et al's (1977) provided the most detailed account of the spread of English in the mid 1970s. Algeria was hardly mentioned then as a user of this language. However, in the next twenty years, between their publication and the present research, the situation changed dramatically due to the sudden realisation or awareness of the importance and use of this lingua franca. English is often referred to as representing an asset to professionals as well as to business people (see chapter 1).

Chapter 3 drew a clear picture on the nature and complexity of the Algerian linguistic situation. Algeria is a particularly complex society by the fact that it is de facto multilingual and multicultural but never recognised as such by its authorities. The motto has always been: "Algeria is our country, Islam is our religion and Arabic is our language". Idea of one nation, one language and one culture is typical of any nation-building state; a more homogenous state is much easier to rule (see chapter 2). But the linguistic situation in Algeria is that among the population there are Berber speakers, original inhabitants of the country, as well as Arabic. There is not one single language of Arabic; there are spoken dialects of the streets and homes which are different from other dialects in the Middle

East, different from Modern Standard Arabic; language of literacy, different from Classical Arabic; language of Koran.

We have also seen, in this chapter 3, that there is the legacy of French; language of the last colonisers. There have been many and regular colonisers but we were more interested in French as it lasted longer and left deeper prints in the country. Following independence, after 1962, Algeria implemented the policy of Arabisation as a quest for identity. This turned out to be a failure as the preparation for it was inadequate and based on political motives. Only French remains up to now as the language of medical science as noticed throughout this thesis for the reason that there has been a lack of money and/or competence to move from this language in which most of the population was trained, mainly the scientific subjects.

However, in the 1980s, when doctors requested English classes it was not generally realised that this language was needed for other purposes than for fun or travel. It was requested for work. Now, this is surprising in 2000 but if one goes back to that period of the 80s, when this research started, and if one can explain the situation, the francophone world did not feel as threatened then as it is now by English. It is true that people realise that English is another lingua franca but French was holding up as a lingua franca in the 1980s at least for the French speaking world.

Doctors at the Paediatrics centre of Constantine have since understood that their IRC (International Research Community) has moved to English and this is the reason why they wanted to move language as well. It was that desire to enter the IRC that was their motivation and was not just a desire to learn English. The present research has taken the opportunity to investigate this consideration as well as the attitudes given to English language from the scientific communities in Algeria.

From our discussion in chapter 1, it has become clear that the use and spread of English is similar to that of former lingua francas throughout human history. The need for English is felt by many in different geographical locations and in many different sections of the economy. The demand for this language is driven by market forces, as the Constantine

doctors show. Thus we are witnessing some kind of bottom-up language shift which has not yet become part of the formal language planning of the country. Algeria's policy makers spent a lot of time, money and effort implementing Arabic as the country's official and national language (see chapter 3). However, globalisation made the individual himself go organically for the language that serves his purpose(s) which is English in this case (see chapters 1 and 2). Before coming back to the discussion of this issue (of language policy) we need to see first how our qualitative data could be categorised for discussion following the results.

6.1 Categories for the findings

These findings fell into four main categories:

First, the use of different languages by the Algerian members of the medical DC (discourse community) and their difficulties of working in a multilingual world. This section has particularly focused on the subjects' perceptions of need and relative importance of English as well as French in the three functions they assume: clinic, teaching and research. They use French to train new doctors, Arabic, French and Berber to treat patients and French and English to research. In this last domain there is a keen awareness that English is eclipsing French as time progresses

Second, the mechanisms and strategies of members working in this multilingual environment. It revealed the doctors' own evaluations of their skills in using the different languages in their environment, and focused mainly on the English language. The doctors reported that the publication of the vast majority of the material they wished to access in English caused them problems. These problems were of different degrees: some respondents felt only mildly hampered; some were blocked entirely from reading what they would like to.

Third, the national system including the provision of resources and the availability of training for the neophytes of the community. In this section the researcher revealed the hierarchies and the members' roles and the difficulties for neophytes in accessing the

relevant information in order to ensure their absorption into the new target community. Some mature members of the DC acted as gatekeepers both linguistically and in terms of resources. The network, therefore, resulted in a conflict as conceptualised in chapter 2.

Fourth, the members' psychological perceptions of their own predicament in accessing information. Both mature members and neophytes of the Algerian medical DC displayed frustration regarding their channels of communication and exchange of information.

Before dealing with a detailed discussion of each of these above categories we first need to reconsider the structure and hierarchy of the medical community under study.

6.2 The hierarchy of the community:

Figure 5.5 in chapter 5 has shown four levels of professional bodies in the Algerian medical community: 1) the professors (consultants), the maîtres-assistants (registrars), 3) the résidents (senior in-house officers), and 4) the undergraduates. Each qualified doctor has to undergo three different tasks in his daily job at the paediatrics clinic and these are: 1) treating in- and outpatients, 2) teaching the medical students, and 3) researching in medicine (seeking new information in medical studies).

The professors (The consultants):

The professors hold the top position in the Algerian medical hierarchy with a free exchange of information with the IRC (we already enumerated in chapter 5 some of the reasons, such as their title or grade in the community, that put them in this favourable position comparing to other members at lower levels). This group of elite doctors operate on an efficient two-way system as far as communication with the outside world is concerned; they access the medical information and acquire its knowledge effectively. There is efficient feedback as well; they disseminate or publish the acquired knowledge. Therefore, they are full members of the IRC. Findings demonstrated that English is perceived as being the gateway to their success. The expectations from their roles is they would cascade down the hierarchy this knowledge they own, and interact with other

members in a purposeful and reciprocal way (see Storer, section 2.5.2.1). In other words, they would have to integrate the residents as well as the maîtres-assistants into their discourse community.

The maîtres-assistants (the registrars):

The professors represent the modal and the target discourse community (TDC) to the next levels down. Becher (1989) talks about an experience of a 'mid-career crisis' this could be compared to the position of the maîtres-assistants during their proficiency in medicine. He states that:

> Career category covers patterns including their induction into the discipline, how their specialisms were chosen, how they established independence and gained tenure, how much mobility there was between specialisms, and whether it was common to experience a 'mid-career crisis' in one's research (Becher, 1989::xx).

They need the specialisation and expertise of the TDC members; they need to be critical in their access to relevant information to be able to acquire the two-way system mentioned above; they also need to develop not only the clinical but also the teaching competence because of their crucial role as supervisors to the in-house officers and practitioners at the clinical departments; last but not least, they need English to help them achieve these purposes efficiently and effectively. At their level, according to the findings, English hinders the efficient modes of purposive communication; in other words, it acts as a block.

However, the findings have also shown that there is a strong awareness among the members of this group that there is no other way around the use of English language if they want to join the TDC (reach the status of professors). Their goals are clear: to preserve their position, be able to gain recognition, titles and grades. Above all, there is one major purpose that is putting this group under pressure: the accomplishment of their doctorate in medical studies. So, what are these members' mechanisms to negotiate their outcomes? It has become crystal clear, throughout this thesis, that the best, most recent and internationally recognised information is available in English language. Obviously, for these adult doctors with very heavy workloads learning a new language is a difficult and an

enormously time-consuming enterprise but these maîtres-assistants realised they have to do it. Consequently, the frequency with which they have to access this relevant information, as displayed in chapter 5, is measured in terms of efficiency or cost:

- It takes them double or treble time to go through a medical article written in English than it would take with a French one.
- To get articles translated costs money with a risk of getting a distorted translated content. Translators may know the language but not the specialist field (as seen in chapter 1).
- Dictionaries remain unsatisfactory; they deal with simple words. The doctors rather have difficulties at the level of the phrase. Even when the block is one word the dictionary may present several alternative definitions with little guidance or it may not have the full medical repertoire.

The section 6.5 below discusses some of the doctors' linguistic difficulties and strategies in accessing the relevant information

The résidents (The in-house officers)

The résidents do not have to complete a major piece of research as their seniors do but they have important commitments during their training phase. They are given responsible roles at the clinical departments. Their training requires knowledge of both theory and practice because they will have to pass a national exam. It should also be noted that it is not the job of medical faculty they trained in to assure the state that the residents have reached a specified level of clinical competence but rather their results following the national exam. The mature members in the highest grades(i.e. the professors) should pass on both aspects of expertise to them. However, as seen in the preceding chapter, they are deprived from the circulation of knowledge from those experts. So, the intermediate members in the hierarchy, the maîtres-assistants, take this role, resulting in dissatisfaction from both sides. See below for further explanation on the effect and conflict (see chapter 2) this relationship has triggered.

The résidents' main purpose is to pass the exam. They concentrate on information available from general and basic journals of medicine (with less critical content) and all written in French. Evidence in the previous chapter has shown that they are also gaining awareness of the necessity and importance of English in their field as well as their individual development. The time of their training is more limited and, for this reason, French becomes a *faute de mieux* solution. English does not seem to be their concern at the moment unless they decide to continue their medical education.

To conclude this section, it can be said that this community is very hierarchical with a clear position and given status to each level of the profession. However, the top level is acting as a blocker to the lower ones. English is perceived as a way around these blockers from the deprived members of the discourse community in Constantine. Below, we shall discuss the dynamics of relationship in this hierarchical, role bound society as anticipated in chapter 2.

As already mentioned, this investigated community of doctors is characterised by different functional purposes depending on the members' roles and functions within the community. Findings have shown that different languages; either French or English, serve different purposes. However, these findings have also revealed an existence of two- nearly separate-sub-communities within the paediatrics centre in Constantine.

6.3 Existence of two sub-communities characterised by the use of two different languages to fulfil the members' purposes:

While considering the medical community's public goals, a distinction was drawn between the use of two different languages serving different purposes. There exist two sub-communities; that is the clinical operational community and the teaching community. Members of the latter choose only French written sources of information to achieve their objectives, that is monitor the patients' state of health or pass knowledge to younger members. Members of the former, the research community, on the other hand, access 90% of medical information they need to be able to keep up-to-date through English. English is

also the medium of exchange with the 'International Research Community' (IRC). In this sub-community reading in English is claimed as being the key factor to success.

The residents in El Mansourah (the paediatrics centre) seem to belong only to the operational community, and therefore use only French. These residents are considered as not at the level where research and thus access to English is critical. Nevertheless, they recognise that their lack of ability in English affects their transformation (see chapter 2) and their likelihood of progressing and joining the target community.

The maître-assistants have different purposes from the résidents as far as selection of medical genres (see below) is concerned. They mostly read in English language in order to further their research; complete a medical doctorate, publish an article in a medical journal, participate in an international conference, etc. However, it is interesting to note that English is used as a mechanism for the members of this sub-community to gain the required knowledge and information, French is used to mediate these purposes (for example, write their thesis, present or publish papers, etc.). The latter is also the language that helps all members to communicate among themselves or acquire general and basic information. For the résidents, French serves any of their purposes: taking exams, reading their notes, writing their medical reports, presenting their cases or just operating in the wards.

To summarise, French dominates in all other areas of the doctors' daily business life such as any of their paediatrics work including all kinds of communication within the ward, presentations, case reports, meetings, forms of writing and correspondence (letters, notes, reports, thesis, articles, etc.), lecturing and other general questions, as well as finding out about any kind of treatment or diet to follow. It is the only language used by the résidents. English remains the language of wider communication. They reported that for research purposes, four-fifths of their reading is done in English to help them extract a maximum of information, and a maximum of references.

French language comes as a facilitator for the above activities since it is the language mastered by the members. So we do get the impression that people read more in French as

a general rule. However, the users do also realise that this language does not answer some key questions, fails to help them overcome the hurdle of research and, therefore, the possibility of being assigned membership of the IRC. The following section discusses the role and significance of English for the community.

6.4 English language is one of the factors that affect the doctors' individual development

It is argued that access to relevant information is the key to a smooth and efficient absorption of the new members into the IRC. Effective participation in the IRC involves effective use of mechanisms for communication. One of these mechanisms we focussed on is language, i.e. English. It is assumed to be the discourse of the concerned community. Its acquisition is one of the public goals of this group.

Examining the role of English in the three types of the doctors' activities inside the medical community the findings confirmed that it is a prime vehicle for the transmission of information. Although English was cited as being an indispensable tool for the investigated doctors, research did not show that it is being used for other different purposes such as clinical work or teaching (see section 5.3 and 5.4 in chapter 5).

There is a strong awareness among the Algerian members that relevant information in the medical field from the IRC enters their community in English and that the transmission of this information is also usually in English. The dissemination of this latter back to the IRC has also to be through the same language it entered their DC and which is English. The following chart (figure 6.1) suggests the model perceived by Algerian doctors in order to transmit the knowledge that enters the community from the IRC. It makes clear the effect English will have on the efficiency of their roles and competences within the community as well as their active participation with the outside community. English becomes a *sine qua non* condition for members to be assigned membership, in its fullest sense, of the IRC.

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:                   │ Access to recent│←──→ ENGLISH
:                   │ information     │
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:                   │ Integrating Knowledge│←──→ FRENCH
:                   │ into Personal        │
:                   │ Repertoire           │
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:                   │ Leading to      │
:                   │ Further         │
:                   │ Qualifications  │
:                   └─────────────────┘
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Competence at clinic FRENCH ←──→ Competence in **research** ENGLISH ←──→ Competence IN teaching FRENCH

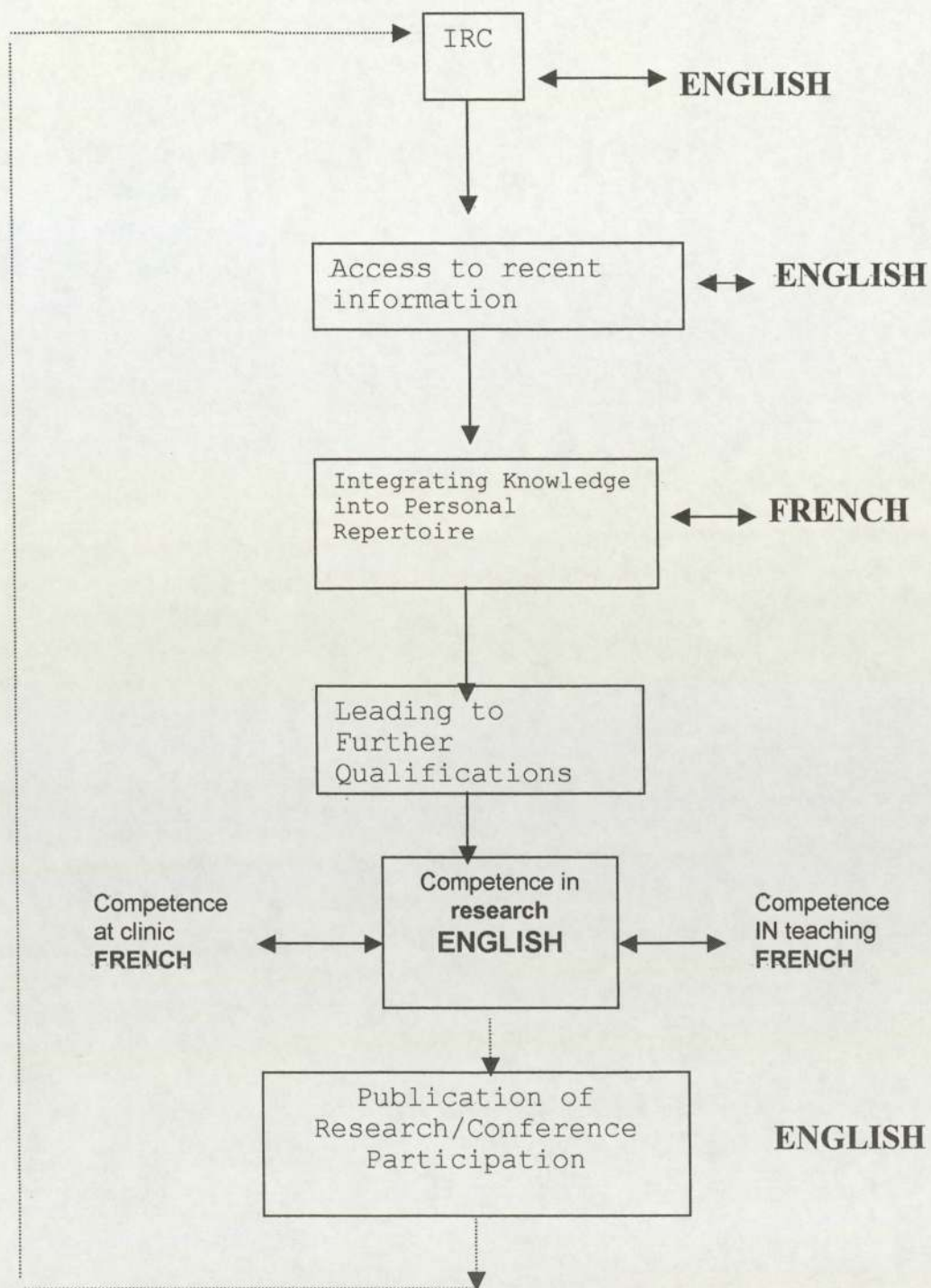Publication of Research/Conference Participation ENGLISH

Figure 6.1 Role and significance of English in the Algerian medical discourse community

This Algerian medical community is a subset of the International research community (IRC). Therefore, by establishing the communication channels with texts, the present study analysed the type of knowledge/information or texts that circulate inside this community. The distinction between text and information is quite crucial to the following description. Both knowledge and information have constructive meanings in this context. Orna and Stevens (1995:16) give the following definitions to both terms:

> Knowledge is the experience we gain from our encounters with the outside world of society, nature, and the written and spoken word. We transform what we find in the outside world, and store it in our minds in 'mental containers'; it is internal and invisible, and the way we organise it is individual to each of us; it is a personal possession that belongs more securely than material goods.

> Information is the visible or audible form into which we transform our knowledge when we need to communicate it to someone else. It is knowledge put into the world for use. And the way in which other human beings use it is to transform it back into inward knowledge which belongs to them. And they too engage in the same cycle of transforming their knowledge into information.

By information, we mean that the subjects read the texts, reacted to them and the content entered the discourse community as knowledge that is part of the common frame of reference. However, in the opposite case, one could notice a circulation of a text that might have been transferred from one member to another (i.e. just the book, or article) but with no feedback at all. In this case the information does not usually become common currency (see figure 5.5 in chapter 5). It was interesting to note from the interviews that when there is circulation of this knowledge and information, exchange and transfer of information with feedback among the members of this DC, there seems to be transformation. The individual develops maturity, social mobility, higher status in the hierarchy, etc.

Would this DC still be considered as viable when exchange of information and feedback within the group with new ideas circulating is achieved with only one category of its members? English is the gateway which permits some doctors to acquire knowledge/information wherever there is new research work to which they can gain access. It is the gatekeeper which keeps the information from others. And from our investigations it seems that because of pressures of work, lack of remuneration for teaching and supervision and other breakdowns in networks, this information does not

easily pass from the former group to the latter. In the context of the Algerian community, the neophytes are not equipped with the expected mechanisms of their target community. This research has proven that English is one of these mechanisms. Therefore, their absorption into the new community is not going to be efficient and effective in the long term.

The other question the results of this study raised was whether the members were going to carry out effectively their roles in both the clinical service as well as teaching without the use of English. This thesis has also proven that, considering the interrelatedness of the doctors' three activities within the community, the clinical as well as the teaching competence are going to be affected by a lack of English use. It is quite logical to think that there is going to be an effect on the concerned member for the simple reason: the best and most recent, thus efficient, findings in the field of medicine are available, almost exclusively, in English language (see figure 6.1).

As noted earlier in this thesis, and according to Swales (1987a), there is evidence of overwhelming role and dominance of English as a medium of communication in the international research literature. However, this study has helped us to understand why there is a limited or a low level of non-native speaker contributions to that literature. This finding leads us to formulate the following conclusion: In order to actively participate in international research a certain level of competence in English language is required. It is of course not a sufficient attribute, but it is a necessary one.

6.5 The members' linguistic skills in accessing medical genres

6.5.1 Significance of genres

It is found that English written genres used by the Algerian doctors act as a communicative vehicle for the achievement of their goal. In relation to this truth, Swales (1990:187) suggested a good example, which has been reflected in our findings:

The thesis or dissertation can either be *a rite de passage* into the targeted discourse community or an exit qualification that enables the holder to leave the university world and enter another one (Swales, 1990:187).

The members' communicative purposes shape not only the genre but also the language in use. The medical genres used by the members of the Algerian medical community are consulted in different languages for different purposes. The ones written in English are for the purpose related to their own research; these genres are described as being more serious, profound and offer sharp and significant information. It is the type of genres selected by the studied doctors that correlates with their status as novice or mature within the medical research community. The genres accessed in French serve the newcomers for all their purposes within the community. They serve also the mature members for the clinical and the teaching sub-communities and are described as basic, of general knowledge. To negotiate outcomes with the IRC, different genres, specific and micro-specialised are accessed and, more importantly, need to be consulted in English language.

6.5.2 Process and strategies of reading English medical genres

Swales (1990:14) considers the 'processing strategies' of experts in a specific genre as a promising and revealing area of investigation. According to him, this will reveal "target-like behaviors which may be very different from those we might anticipate, and additionally may be able to throw light on how, why and to what extent genre-texts evolve in response to processing strategy. Regarding the Algerian subjects' processing of reading medical articles, the findings displayed a reading pattern similar to Huckin's (1987) own findings of his study with six junior American scientists:

> When I asked them to demonstrate how they customarily read a newly-published article in the field, they all displayed a reading pattern dominated by the search for new information. First, they read the title, then the abstract, then they look for the most important data usually in graphs, tables, drawings and other visual aids. Next, they typically read the results section. At this point, their reading pattern is varied, depending on how well they knew the topic and how confident they were of the scientific methods used (Huckin, 1987:4; cited in Swales, 1990:15).

Interestingly, most interviewees demonstrated the same reading pattern while searching new and relevant information in their field of research. The title and abstract are always the first sections of an article they would look at; if the article seems interesting to them they would then read the discussion and conclusion. Only if the topic is evaluated as relevant to one's research material are the methods sections consulted. Following this evaluation, the Algerian doctors' reading strategies will change accordingly. They would concentrate more on the article and tend to scrutinise it and read it many times instead of skipping and skimming or just get the gist. A similar behaviour noticed in Bazerman's (1985:11) study on the processes of reading with seven research physicists. A study which revealed a use of selective reading strategies on behalf of the interviewees and a non-sequential reading with different degrees of concentration depending on how purposeful are these articles.

This is different from Nigel Bruces' (cited in Swales,1990:15) findings among a group of Arab medical doctors working in Kuwait. His study unveiled even more marked strategies as subjects tended to start with the Discussion section and if that was of any interest, they would move to the Results.

However, what is more interesting in the present study of Algerian doctors is that different articles are evaluated or assessed differently by their readers depending not only on their purpose; i.e. their importance and relevance to the member's field of research, but also on the degree of their relative difficulty. Therefore, access is governed by their understanding of the language they access this information in.

Although some interviewees claimed that French journal articles may be intellectually rigorous and applicable to certain specialisms it seems a general rule that the doctors tended to prefer English articles for their serious research specialism and would turn to French for journal articles which were of general interest only.

The reason given for the choice of French is because it is easier and less time consuming for this practical work, whereas the use of English is obligatory and indispensable for any research work. The dissemination of the theoretical knowledge of medicine requires a display of up to date literature that is English dominated. This fact is similar to Bazerman's

(1988) finding that: 'They all [physicists].... accept the distinction between core work close to their own and peripheral work, which is important to keep up with, but read more informationally and less critically'.

Information that is presented in a foreign language to its reader is certainly going to linguistically impede him/her. However, Some of the findings in this study showed that members use short cut strategies to access the relevant information. Some of the sample are managing to get access to relevant information because they understand the structure of writing in their discourse community. Their mastery of the genre in their professional area helps them access it even when it is in an imperfectly mastered foreign language.

The more mature members, more confident with the use of English, insisted that the Abstract is a section which should be read first in the sequence of an article. This represents an evidence of its value which, undoubtedly, lies in its size, saving time to the reader while evaluating a particular article. according to Salager-Meyer (1990:108), "...not only do they serve as a pre- and post-reading device..... but also, if comprehensive enough, they substantially cut the scientists' reading load and help them cope with the ever increasing journal explosion by allowing them to quickly identify which articles are of potential value"

Nevertheless, it is known that scientists are frustrated at not being able to cope with not only the increase of published medical research but also the complex structure and difficulty of certain abstracts. We know that they represent a source of difficulty for non-native speakers. No wonder that respondents who do not feel the urgent need to access the medical information written in English- in particular, those who do not belong to the Discourse Community Pressure- the residents for example, said that they never read further than the first sentence in the article. This first sentence might have been the one from the abstract section.

6.6 Malfunctioning of the community causes conflict within the community

6.6.1 Members' roles

It has been argued that for a system to exist it must have constant input and output, and for this system to function efficiently there must be dynamism ensured by human activities and, importantly, a purpose (see chapter 2).

Dynamism inside this community requires constant training of novices by older experts. These members are the ones who would ensure the survival of the community if they are helped in their development and maturity. They would join the IRC and in turn would help the new generation of doctors within their community. However, the inadequacy of the neophytes' training presented in chapter 5 and discussed above, the lack of structural support together with scarce human and material resources led the community to function much less than efficiently. One wonders how new comers could be protected from the "shock waves" (see Thom, chapter 2) encountered in their new environment if older members do not help them cross the boundaries.

Within a given organisation/ individuals may, on the surface, appear to try to make their institution better in terms of performance (number of graduates, articles published, books, conferences held, etc.) and they undertake their tasks to achieve these objectives. However, each individual represents a set of self-imposed objectives which often are in conflict as far as the main objectives of the institutions are concerned. For example, the director will put forward the fact that the hospital has treated a record number of patients, succeeded in achieving a high rate of successful complex operations/ surgeries, etc. and at all levels of the institution (here the hospital). There is a relative consensus and satisfaction regarding the performance achieved.

At a different level of analysis, individuals are more concerned with their personal achievement and would behave in a way which is seen as 'morally' unfair. (see 'social network' in chapter 2). Medical doctors at the hospital of Constantine have informed the

researcher about the situation where the top medical doctors who hold senior positions receive international medical journals which are never mentioned to their colleagues under their supervision. This phenomenon does underline the following paradox:

On the one hand, senior medical doctors prefer to progress on the international level without any form of contact or information at the local level.

On the other hand, the logical motivation of a highly qualified doctor is assumed to transmit knowledge to lower qualified doctors so that medical progress is achieved not for individuals alone but also for their patients.

It is clear that the neophyte (résident) is not perceived as a mature member of the Algerian DC and thus, was not considered as a significant participant in the negotiation with the IRC. There has been minimum significant and critical interaction between the neophytes and the mature members. The opportunities offered to them to acquire the TDC repertoire were limited and they were not expected to participate in the IRC. The danger with such a closed channel, as highlighted in chapter 2, is that there will be no innovation.

6.6.2 Information Network

The standard product of the member's knowledge which bears witness to their transformation (i.e. acceptance into the IRC) remains their published research. Among explanations given for the absence of this audience in active participation in the international arena are not only the limited resources noticed in any lesser-developed country but also and importantly the linguistic limitations. We already mentioned the fact that most conferences and international meetings are held in English. The NNSs would not be able to convince the audience if they do not fully master the linguistic skills with which they must negotiate outcomes. As demonstrated, with the Algerian researchers there is very little time available from their academic and scientific careers in order to develop and sustain high-level English language skills. Later on, Swales (1990) refers to this lack of language skills as causing an impediment to any potential discourse community to join the target DC. In other words, not owning a standard skill of English language makes the ASC

(Algerian Scientific Community) a deprived one. One can detect that the doctors as part of the ASC are certainly a discourse community but one which could be called a deprived DC.

The best qualified of this community are writers as well as readers of scientific literature. Their knowledge and expertise are needed to be exchanged with other members of this community so that everyone can profit from it and will be able to contribute to it. It is evident from even a cursory glance at the bibliographies of these writers that they are drawing mostly from texts published in English. There is little reference to work in Algeria and no use made of the information which originates within the community as opposed to that which originates outside.

This lack of acknowledgement of the work done within the country may have an effect on the Algerian medical community, causing it to see itself of lesser value. This of course has wider implications for Algeria, whose reputation and position in the world are a sum total of these perceptions. The consequences of this are highlighted by Redjala (1970:118) as follows:

> Nous au contraire que si nous ne produisons pas de Chef-d'œuvre, c'est parce que nous employons des outils étrangers que très rarement nous réussissons à maîtriser pour en faire un usage judicieux

Below the professional level, the members' interaction and exchange of information is well motivated and of good will. However, it is a closed network which disseminates locally, limited to the Maghreb. This is a fairly hard-shelled network which does not exchange with the exterior. This could lead the community to stagnation because it was argued that a community's survival depends on its dynamism. To get a network of this Algerian DC to radiate one has to start thinking to solve the question of language. Some recommendations are listed underneath. A thorough study needs to be done before these perceived solutions are accepted by the community members as well as considering their feasibility in the context of this community.

6.6.3 Channels of information

From a brief analysis on the question of channels of information. the findings illustrate a situation which is completely different from the idealised one (figure 4.1, in chapter 4), as shown in chapter 5 section 5.4.4, they are mainly achieved through friends, personal search from libraries abroad (France most of the time), sometimes from 'l'Unité de Recherche' established since 1992 in Constantine and which has access to 'Medline' through computers. There seems to be major difficulties in acquiring adequate scientific information. The lack of human and material resources are at the origin of the inefficiency which affects the community. Other important environmental constraints are also enumerated by the subjects as being an impediment for the members to actively participate in international research communities. The members of the medical community under study are being frustrated in different ways while trying to fulfil their goals.

6.7 Role of Arabic in the medical community

In this mainly Arabic and Berber speaking community, the use of Arabic language, although a national language, is totally absent as a medium for the fulfilment of these tasks apart from the doctor-patient interaction. The results displayed in the first part of the analysis chapter showed that the members had to use mostly English with French language to access the required information for either researching the latest findings of medicine, teaching medicine to neophytes or simply, dealing with the operational work at the clinic.

The issue we need to raise here is the following: the situation in medical education up to now has been to the standard of Algerian national requirements with French as the medium of instruction. One wonders what would the situation be with the coming generation of doctors. They have been educated in Arabic, chosen probably English as a foreign language (see chapter 3) but when they enter medicine only French is used as the medium of information and instruction in all aspects. One can anticipate that these future members of the medical community will face great impediment in their access of medical information in French, which will have greater impact on their individual progress, clinical competence, and, consequently, on the development of the country then the older

generation schooled in French. Will their proficiency in medicine following their training be jeopardised because they span the shift from French into Arabic in the Algerian education system?

6.8 Attitudes towards choice of languages

What is interesting is the use of the word 'dominant' (to express the dominance of English) in this domain because it does not just mean it is very well used and widely used, it also means 'dominate'. This is an attitudinal problem, of course of people who do not use English as a native language but need this language because it gives access to a professional discourse community. They may feel that the speech community they are trying to join is a superior community and therefore, both aspire to it and hate it. So here we have the attitudinal problem towards a community as well, it is not just a matter of acquiring a language as a mean of access to a community but also the problem of overcoming psychological aspect towards a language. One of key concepts in sociolinguistics is dominance of languages and the idea that one language dominates another does lead either to acceptance or rejection of the community may be partly that which is behind the resistance of some Algerian doctors in gaining access to English scientific or medical information although none admitted this directly. It is not just the difficulty of language; it is the fact that they think it may be a code to which they should not aspire. This is certainly another factor to consider in dealing with the problem of language impediment to access a scientific community.

6.9 Summary and conclusion

The objectives of this research were to
- assess the efficiency and effectiveness of individual's communication in this global, lingua franca dominated system;
- determine the importance of such languages in the development of a country;
- investigate the best way to encourage access to the international community.

To which extent have these objectives been demonstrated?

These objectives were investigated by looking into the channels and modes of communication among the Algerian members of a medical discourse community. This was achieved through the utilisation of multiple data collection methods with a qualitative approach. The main source of data was the in-depth interview as it revealed the inside network relationship within the community. Questionnaires and observations turned out as other contributory devices to confirm the findings.

Inefficiency and effectiveness of individual's communication are triggered by a number of other factors that do not necessarily have to do with his competence; they are impediments from outside his control. Factors coming from a macro dimension and affecting the micro one which is the community he belongs to. This seems to work in a vicious circle; now, this inefficiency is reflected in the macro sphere because it has affected the development of this individual who is the important actor for the development of the country.

The role of languages in the development of the country has been highlighted throughout the whole research, mainly in chapters 1 and 2. Despite the fact that this thesis was hoping to raise awareness of language policy makers about the importance of such foreign languages as French and English, it was also a good example of how language grew organically, as seen in chap 2, section 2.4, and stemmed from individual choice and the social pressures of modernisation.

The best way to encourage access to the IRC is done through some recommendations proposed in the next chapter.

To conclude this chapter, one can say that the present research presents an evidence of the barriers to gaining recognition for research excellence which comes from insufficient skills in the language of the IRC. It has also shown that all members of the medical community are hampered to some extent by the difficulties of accessing information in what is for some a second language and for others a third. We could imagine that this has an effect on the national community, a cause-effect relation between a macro and micro community. The health and efficiency of the hospital as a whole depends on the competence of the

doctors to access the research. When they are unable to do this effectively the patients bear the consequences.

So one of the ultimate aims of this research is to help make this deprived research community an efficient one by actively participating in the IRC. However, the achievement of such a goal is conceivable only if the necessary and sufficient conditions are satisfied and if the mechanisms are effective, efficient and efficacious. This research has shown how significant the role of English is in this area. To repeat an earlier claim, it is a necessary if not sufficient precondition for medical advance.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

Thirty-two years ago, Gallagher (1968) made the following assumptions about the Algerian linguistic state of affairs in the future. He started with the paradox that exists between the two ideological forces in the country: the concept of Islam and the desire to implement socialism to achieve economic development. Protest was often raised in advocacy of one or the other. Where the left was potent and numerous, as in Algeria, it seemed inevitable that the conflicting pull toward secularism and the counter-reaction stimulated among those who resisted, it would someday lead to a showdown. (Gallagher, 1968:146)

The 1990s are the 'showdown' of this unresolved issue mentioned by Gallagher. However, he did not predict such a violent outcome. This is linked to the emergence of a radical religious movement at odds with an extremely socialist faction. This movement became involved in terrorism against both the local population and against what is described as the western way of life and culture, including foreign languages. As we explained in chapter 3, this fundamentalism and its opposition to the West had its origin in the anti-colonial movement. Arabisation as a language policy is closely identified with the fundamentalist movement. Fundamentalist education which defends the strict implementation of Islamic law in Algeria is implemented through Arabic and closely associated with it (Benrabah, 1998).

So can a foreign language, representing an impersonal, secular way of life, coexist with one fundamentally opposed to it in ethical terms when the latter is rooted in its religious foundation as strong as it is today in Algeria?

Will reformist groups (of one or another kind) open the country to modernity, globalisation and the free market and a consequent weakening of religion which will have repercussions on the linguistic future of the area?

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In her concluding remark of a PhD submitted in the early 1990s, Saada (1992:147) made a similar assumption on the future of the Algerian planning of languages depending on political movement, there will be a stringent and general Arabisation in all areas if the leaders are Muslim fundamentalists. They will even go further in their attempts to remove French as a foreign language. But if the country is led by the modernist group with a democratic tendency, "bilingualism will likely come back with French language used for the technical and hard science subjects and Arabic for social sciences and the civil services."

We would add nearly ten years on that the situation is even more complex. The issue of language choice still causes the same problems. Gallagher's view was very powerful in that the state-of-things with regard to language and politics and their link with the religious aspect developed exactly as he predicted. He came to the conclusion that the crisis will never be resolved unless the question of identity is resolved. In his words: "The hidden dividend for suffering through a crisis of identity is that there is a valid choice. Not until North Africans make it will we have our answer" (Gallagher, 1968:147). When the issue of identity is in conflict with the specific issue of language in a single country then the various communities compete in a social system in order to dominate the 'other' (Benrabah, 1998).

According to Blikenstaff and Moravcsik's (1982:136) there exists a positive correlation between political stability and the growth rate of science. An awareness strongly shared by the members of the Algerian scientific communities. This feeling was raised throughout the findings chapter in formal (JAM conference) or informal settings/interviews. Therefore, the instability is associated with a negative or adverse effect on publication and participation in the IRC. The reason for this impediment is mainly related to the question of finance. Mme Ali Khodja stated during her presentation at the JAM conference (1993) that "Science sans politique nationale ne pourrait pas avancer quelles que soit les potentialités". This underlines the trivialisation of the science issue by the government and some parts of the population. This is equally true for the issue of language. This research is hoping to raise awareness and get the owners (Government, specific ministries in particular) to be involved. Their absence at the conference (JAM 1993) was underlined by

Professor Aberkane and described as 'un détachement des intérêts de la science' (see chapter 5)

When it comes to language policy in Algeria there are noticeable dissatisfactions on behalf of the individuals undergoing the politically motivated decisions as far as education is concerned. The nationalist/religious standpoint of Algerian decision makers prevents them from realising that Arabic cannot be a medium of scientific instruction and knowledge in a global era. This fact was already highlighted in many writings of Algerian sociologists, linguists, educationalists and socio-linguists. Among them, Saada (1992) whose research focussed on language planning and policy of implementing Arabisation in Algeria. She reported one of her subject's comment which, in the researcher's opinion, has rightly addressed all aspects of Arabisation issue:

> On a remarqué, nous, en tant qu'étudiants, que la plupart des lycéens ou bien des étudiants qui ont fait leurs études en arabe font face à un grand problème de documentation, celle-ci n'existant pas en arabe. Ils sont donc forcés d'utiliser une documentation en français ou en anglais, langues qu'ils ne maîtrisent pas. Donc objectivement parlant, je crois qu'il faut laisser la langue française comme langue d'instruction scientifique et l'arabe comme langue littéraire car cette dernière accuse un retard d'un siècle et demi par rapport à la science (excusez-moi si j'exagère). En accusant ce retard, elle nous induit nous aussi au retard. Ne dites pas que je suis néo-colonialisé (je pense que je suis objectif)! Je pense qu'il faut supprimer cette idéologie de langue étrangère ou bien de colons, car elle nous sert beaucoup. Mais à ce que je vois, l'introduction de l'arabisation n'est pas réfléchie car elle est introduite seulement pour refléter l'identité algérienne. En oubliant avant tout que l'Algérie ainsi que toute l'Afrique du Nord est Berbère. Il ne faut pas faire semblant d'ignorer la vérité. On est donc Berbère et on le restera.

This quotation has been chosen for, on one side, this respondent's perception of reality regarding language planning and policy in Algeria. On the other side, for he is a scientist subject as well and, therefore, the same opinion has been expressed by the subjects of the present study. The link with this research is the use of a foreign language as a medium of knowledge and information. Consequently, the purpose for looking into the micro sphere is to be able to identify the macro problem of language choice in the Algerian language policy as well as analyse its role in the country's development.

Blikenstaff and Moravcsik's following quotation suggests that third world countries should be optimistic as there is way for improvement and betterment on the question of scientific output.

> ....It appears that a country with a small scientific output is not necessarily deemed to stay with such a small output, but has about as good a chance to grow as countries with an already larger input (Blikenstaff and Moravcsik's, 1982:164)

The main question raised in this study is: How to seek for the most efficient solution with such limited resources? There is no doubt that one can never be too optimistic and utopian by thinking s/he could solve all the perceived problems in this community. However, what is possible should be to start with the linguistic element, with the hope it will lead to a cause-effect relationship, by improving communication among members of different communities, facilitating their use of a code and, last but not least, helping them acquire the worldwide code vital to their development.

Thus if we accept that it is the macro environment which shapes this situation and that the individual can only work within these parameters, what could be the recommendations in this respect? If we return to Checkland and Scholes (1990) checklist we can see that this research helps us to understand the interacting elements.

> **C** 'customers': the victims or beneficiaries of T
> **A** 'actors': those who would do T
> **T** 'transformation process': the conversion of input to output
> **W** 'weltanschauung': the world view which makes this T meaningful in context
> **O** 'owners': those who would stop T
> **E** 'environmental constraints': elements outside the system which it takes as given

> (The Catwoe Mnemon reported from figure 2.1 in chapter 2)

In the case of the medical community these elements will reflect the following:

The **customers** are the patients who would obviously benefit from this transformation or be the victims if there is none, as so well illustrated and anticipated by the members themselves (see chapter 5). The **actors** are the doctors who would undergo this change by being aware of the newest and more effective findings in medicine by reading in English.

A fact of which most of them are aware and most have started in this direction. Their **transformation** will happen thanks to their access to the relevant information and their ability to transmit back their knowledge; their feedback through the medium of English. This will guarantee their membership to the IRC. The last elements have equally been very important in this research. On one hand, there are the **owners** such as the ministry of Health as well as Higher Education who have the power to hinder this transformation in a micro way by providing the resources for information retrieval and in a macro way, by implementing language in education policies which direct Algerians to new speech communities. The indirect responsible will be the gatekeepers in the profession such as the experts at the top of the hierarchy as clearly shown in our finding.

On the other hand, **environmental constraints** will have an even bigger role to play in the transformation and development of the individual. The lack of human and material resources could only cause an inefficiency in the transformation of medical doctors in Algeria.. This has been highlighted non-stop throughout the interviews. The biggest constraint, however, remains the linguistic one. The members of the Algerian medical fraternity have soon realised that the only way to get round the human and material blockers is by learning the language of the IRC and, therefore, will manage to help themselves undergo the transformation needed for maturity and passport to the IRC.

Having understood the situation, what can you do about it? At the micro level use of Reeves and Wright's tools (see chapter 4, figure 4.1) will allow us to pinpoint the points at which English is an essential skill in the circulation of information.

We have already mentioned that reading research articles in medicine is one of the most important English language skill required by Algerian medical doctors. There has been an extended research on how students are helped to enter the discourse community of writers, among them (Fish, 1980; Bizzell, 1982; Williams, 1983; Freed et al, 1987; etc.) but hardly anything on how they could enter the community of readers.

Among the members, an acquisition of English is done by integrating its teaching in the university syllabus and also by encouraging people to read more in this language. In their words:

- Intégrer l'enseignement de l'anglais dans les universités et surtout en matière médicale... l'anglais, langue mère
- Encouragement à lire; une analyse sociologique sur l'habitude de lire.

'Encouragement à lire' (encourage people to read) as suggested could be another recommendation to be made to the medical community members. Roe (1996) claimed that a language 'can only be acquired through reading millions and millions of words in the target language.' However, although these doctors know how to read and do actually read mainly in English, as it is the only way to access the target community, but as they complain, it is achieved in an inefficient and not cost-effective way. So, the solution one has to look for is how to make reading more efficient.

However, it should also be pointed out that such a discipline involves sub-specialities which in turn include different key terms used in their particular specialist literature. How would it be possible to design such a heterogeneous course? Existent research demonstrated that the purely technical/medical terms are not the source of the doctors' reading problem but rather the terms that collocate with them. Roe (1996) claims that: "You only learn by joining the discourse of the discourse community". It is only possible to acquire the community discourse by being a member of this discourse community, otherwise it is only the learning of linguistics without the semantics.

Flowerdew's (2000:147) makes interesting recommendations with regard to learning as legitimate peripheral participation and these are:

> legitimate peripheral participation is likely to come about through the encouragement of attendance at international conferences and exchanges of scholars between the centre and the periphery. Similarly, international collaboration in research is likely to be beneficial.

In other words, there is an encouragement towards an open and soft-shelled network, concepts we raised in chapter 2, and provided evidence for in chapter 5. However, we noticed that older members were acting as the gatekeepers to this legitimate peripheral participation. A more realistic recommendation in this context will be an efficient provision of human resources, an approach to apprenticeship that is adequate and cost effective for Algerian scientists.

Then, Flowerdew concludes his recommendations as follows:

> In considering the sort of training that might be offered.... however, instead of being designed as a formal, teacher-fronted package, such instruction might better be envisioned as an opportunity for bringing together apprentice professionals to share their experiences and reflect together on their ongoing legitimate peripheral participation. In such a programme, young scholars would meet periodically to interact with their peers, receive a certain amount of formal instruction in academic writing, and be mentored by both subject and language specialists. (Flowerdew, 2000:147-148)

Flowerdew's (2000) recommendations are, particularly valued in here as they were drawn from a study of a non-native-English speaking scholar who struggles to get his paper published. The author claims that this difficulty stems from the subject's competence in writing in his L2 language. Although his study refers to writing for academic publication and his subject has not only been exposed to English since his childhood but has also been educated in this language and holds a doctorate degree from USA, the same could be recommended for reading research articles, in general, and understanding medical literature in particular.

Furthermore, in the case of this and any other Algerian discourse community the following recommendations are made:

- Educational system is undergoing constant transformation by the state, therefore it is hard to see the real impact of the policy changes introduced. The issue of the place and role of foreign languages is in fact the most controversial for all the reasons developed in across this research. What is needed is a clear language planning that takes into consideration both the quest for national identity and that of the allowing the national scientific community to be a full part of the IRC.
- Language should not be looked at as a political and ideological forum but rather as a medium to acquire knowledge.
- Progress in information technology and communication would foster the acquisition of any new publication across the world, be it in French or English in this matter.

- The state should look for external support in terms of specialised journals that could be acquired at subsidised prices so that they can be disseminated to a larger audience, UNESCO being an obvious organisation in this direction. By doing so, the acquisition of new knowledge will cease to be the ownership of a few selected members due to their respective position in the administration or their links to the state institutions.

Conclusion

New teaching methods in the English language are therefore required in Algeria in order to achieve a two-fold objective: (i) to allow the scientific community and other categories to reach a better standard in reading and understanding English, and (ii) to allow this scientific community to be fully integrated and recognised by the international research community as this is the ultimate desire of the specific case of the Algerian doctors. Indeed, they consider English as a gateway to reach this international level; a dominating language. However, as Kennedy (1983: ix) declared and as shown in chapter 3, there is a link between a national language planning and classroom practice so teachers need to have a better understanding of the national language policy in order to become effective and successful in his/her teaching of a language. This is expressed as follows:

> At the focal point of educational language planning is the teacher, since it is the successful application of curriculum and syllabus plans in the classroom, themselves the instruments of higher levels of planning, that will affect the realisation of national planning..... (Kennedy, 1983: ix)

With the phenomenon of globalisation, as stated throughout this thesis and more particularly in chapters 1 and 3, the use of English will certainly expand even further, making the need to learn English even greater in this case. It is hoped that the present research would contribute in achieving this in the future in Algeria.

This study aims as well to help any developing country to be more efficient and more practical in the teaching of a foreign language. Technology is no longer an inaccessible tool as it used to be. A presence of a good computer with a good expert will make a

tremendous change to any discourse community in the need to acquire the foreign discourse of their community.

It is hoped that this research will be regarded as a contribution not only to the general body of foreign language leaning knowledge but will also lead to a greater awareness and understanding of the linguistic constraints on the professional life.

Scope and limitations of study

Unfortunately the present researcher cannot undertake any further given the political context which has developed in the country since the research period of 1993-94.

Although there has been an advantage in leading this research with this type of subjects, the doctors, as one could more easily get their perceptions. the researcher was still encountering some particular difficulties under this qualitative technique. It was noticed that the subjects were

- touchy on questions of prestige to do with jobs and also on questions to do with criticising responsibilities and roles within the community

- not overtly using the medical information (for their research) when they were asked about the place of reading they answered that it was at home and in the evening. Contrarily to our expectations, library does not seem to be the ideal place to most of the doctors to document in their subject. Those parameters have led the researcher to carry mostly interviews with the subjects, to evaluate attitudes towards the relevant utility and prestige governing the choices.

More participation in interviews from medical professors would further enrich the findings of the study. The lowest level in the hierarchy of the medical fraternity; that is of medical students (undergraduates) has not been selected on the assumption that they are not considered helpful for this research. They are relatively new to the DC and do not seem to reach the required maturity to discuss the mode of information most needed in their domain. Although one could argue that they might represent a good sample of first hand experience of being totally new participants in the new world. They are the product of the new policy.

Other limitation is that the research focussed on only one medical clinic, the Paediatrics Centre of Constantine.

Last but not least, it must be pointed out that this research was led in the 1980s, at the time where there was a state control economy in Algeria. There was more concern with industry development rather than provision of resources in other sectors such as education and telecommunication. The question of language teaching development was even more trivialised as stated in this thesis.

Nowadays, because of the globalisation, the situation in Algeria is different as free market dominates and, therefore, improvement in technology started with a considerable use of the Internet. This is opening the country to the outside world where communication is bound to happen and develop more and more.

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APPENDIX ONE (A)

QUESTIONNAIRE

Dear Doctors,

I am seeking to provide help with the problems faced by Algerian doctors confronted by increasing need of understanding and practising English language either in listening, reading, speaking or writing.

Considering the fact that the English language has become one of our most important tools of work and means of research, the aim of this questionnaire is to find out more about how English is used in your own speciality and area of research.

This information will help us design an English course based on your medical reading in English. Please, could you fill in this questionnaire as carefully and as soon as possible. Additionally, in order to help us select and design interesting, useful language materials for this English course, please could you (if possible) provide us with a copy, or just titles of 6 to 10 English language articles that are of a certain interest to you.

Thank you very much for helping us to help you.

Mrs L. Bouattia.

Please fill in when appropriate or tick when appropriate this questionnaire.

1- Name:

2- Age: 20-39 yrs   40-60+ yrs

3- Position:

4- Speciality:

5- Degree:

6- List any other occupation:

7- Are you doing any research?

Yes   No

8- If yes, could you specify the field and purpose of this research?

9- Are you reading for a doctorate in medicine?

Yes   No

10-If yes, for how long now?

11-Do you read medical documents (books/ articles)?

	yes	no
English		
French		
Arabic		
others		

12- What is the frequency of the reading of this medical information/ documents?

	very rarely	sometimes	often	very often
English				
French				
Arabic				
others				

13- What is the relevance of this medical information to your **own research**?

	not relevant	somewhat relevant	important	essential
English				
French				
Arabic				
others				

14- What is the relevance of this medical information to your **own operational work**?

	not relevant	somewhat relevant	important	essential
English				
French				
Arabic				
others				

15- What is the relevance of this medical information to your **teaching** (if any)?

	not relevant	somewhat relevant	important	essential
English				
French				
Arabic				
others				

16-What is the speed of your reading of English language medical articles?

very slow	slow	medium	fast	very fast

17- How do you evaluate your comprehension in reading English language medical documents ?

very bad	bad	not too bad	good	very good

18- What is the usual sequence of your reading of a medical article? (number the order)

title   method and materiel

abstract   discussion

introduction   results

200

19- If it is n<u>ot</u> always regular, could you specify what it depends on?

20- Which sources do you use to collect your medical (references) documents / articles?

	Algerian doctors	foreign doctors	Algerian supervisor	foreign supervisor	Algerian library	foreign library	own search on computers
English							
French							
Arabic							
others							

21- Please, specify any other sources used to collect these medical journals or documents not mentioned in here.

22- Could you give a list of the most important journals or reviews you always select or wish to select in your reading of medicine?

23- What is the last article, written in English, you have read? (please say when you read it).   –

—

–

24- Could you list 6 to 10 key terms you look for in the selection of your medical reading?

25- Have you ever published in a local and/or foreign journal or given a talk in a national and/or international conference/workshop?

yes   no

—

— .

26- If the answer is yes, please indicate title, date and place of publication if possible.

27- Please indicate (tick) your answer(s) to the following question:
To learn English will:

a. allow me to be a successful doctor,

b. allow me to possess a most updated knowledge in medicine,

c. allow me to further specialise abroad,

d. allow me to find a job abroad,

e. other (please, specify).

28- As a medical doctor learning English, you have been involved in few activities which have a particular significance to you, please indicate which aspect(s) seem most relevant to you by ticking one or more of the options below. You have been using English to:

a. understand conference talks and workshops,

b. read medical reports,

c. read complex medical books,

d. read the instructions leaflets about drugs and medical equipment,

e. write medical reports to English speaking colleagues,

f. take notes during conferences and workshops,

g. write elaborate articles in well established medical reviews and journals,

h. give a talk during conferences and workshops,

i. simply write letters to friends,

j. other (please, specify)

29- Please indicate by ticking one or more answers to the question: I use English outside my professional activity:

a. for my own pleasure,

b. to listen to English speaking radio programmes,

c. to understand English TV programmes,

d. to have a discussion with foreigners,

e. to read English newspapers or magazines.

f. other (please, specify)

30- do you have any advice to give to the writers of the English course?

APPENDIX ONE (B)

Chers Docteurs,

Je souhaite aider les médecins algériens sur le plan de l' apprentissage et l' utilisation de la langue anglaise qui est, semble-t-il, de plus en plus demandée dans ce domaine.

Portant du constat que la langue anglaise est devenu un outil important dans la pratique de la médecine et dans la recherche, le present questionnaire vise à cerner vos difficultés et à identifier vos besoins afin de rendre plus éfficace l' enseignement de l'anglais en médecine.

Les informations recueillies serviront à élaborer un cours d'anglais basé sur vos lectures en anglais. Veuillez remplir ce questionnaire avec autant de précision que possible et le retourner rapidement s'il-vous-plait. De plus, veuillez joindre 6 à 10 copies ou titres d'articles écrits en langue anglaise que vous avez lus (ou comptez les lire) afin de nous aider a formuler un cours d'anglais qui sera intéresant et utile pour vous.

Merci pour votre aide précieuse qui va nous servir pour vous aider à notre tour.

Mme L. Bouattia.

Dans ce questionnaire, prière de cocher ou de donner votre réponse aux questions. _

_

1- Nom:

2- Age: 20-39 ans   40-60+ ans

3- Fonction:

4- Specialité:

5- Diplôme:

  _

  _ .

6- Autres fonctions:

7- Faites-vous de la recherche?

 oui   non

8- Si oui, veuillez préciser le domaine et l'objectif de cette recherche.

9- Êtes-vous inscrit à une thése ? _

 oui   non

10- Si oui, depuis quand?

11- Lisez-vous des références en médecine dans les langues indiquées ci-dessous?

	oui	non
anglais		
français		
arabe		
autres		

12- Indiquez la fréquence de la lecture de ces informations médicales?

	trés rarement	quelquefois	souvent	trés souvent
anglais				
français				
arabe				
autres				

13- Par rapport à **votre recherche**, quelle est l'importance de ces informations médicales acquises à travers ces lectures?

	sans importance	peu importantes	importantes	indispensables
anglais				
français				
arabe				
autres				

14- Par rapport à **votre travail de médecin**, quelle est l'importance de ces informations médicales acquises à travers ces lectures?

	sans importance	peu importantes	importantes	indispensables
anglais				
fançais				
arabe				
autres				

15- Par rapport à **votre travail d'enseignant** en médecine, quelle est l'importance de ces informations médicales acquises à travers ces lectures?

	sans importance	peu importantes	importantes	indispensables
anglais				
français				
arabe				
autres				

16- Indiquez la rapidité avec laquelle vous lisez les articles en médecine écrits en anglais?

trés lent	lent	moyen	rapide	trés rapide

17- Indiquez le degré de compréhension de vos lectures d'articles en médecine écrits en anglais?

trés mauvais	mauvais	moyen	bon	trés bon

18- Dans quel ordre généralement procedez-vous pour lire un article en médecine écrit en anglais?

titre   méthode et matériel

résumé   discussion

introduction   résultats

19- Si vous ne suivez pas strictement cet ordre, indiquez quels sont les facteurs qui pourraient vous influencer pour suivre une autre séquence?

20- Précisez la ou les source(s) d'information que vous utilisez afin d'acquérir de la documentation médicale.

	Docteurs Algériens	Docteurs étrangers	Directeurs de recherche Algériens	Directeurs de recherche étrangers	Bibilothèques en Algérie	Bibilothèques à l'étranger	contactes personnels à travers un réseau informatique
Anglais							
Français							
Arabe							
Autres							

21- Pour obtenir des informations en médecine, veuillez indiquer d'autres sources d'information autres que celles indiquées plus haut.

22- Quand vous avez le choix de revues spécialisées en médecine, quelles sont celles que vous lisez régulièrement et quelles sont celles que vous aimeriez lire?

Les revues **choisies:**

Les revues **souhaitées:**

23- Quel a été le dernier article que vous avez lu et quand? *(en anglais)*

24- Citez 6 à 10 mots clefs qui vous servent de guide pour choisir une documentation en médecine.

25- Avez-vous déjà publié dans une revue locale ou étrangère, ou bien donné une conférence lors d'un congrés ou colloque en médecine?

oui   non

26- Si oui, veuillez indiquer le titre, la date, le lieu et la langue de publication si possible.

27- Veuillez cocher ou indiquer votre/vos réponse(s) à la question suivante:
'Apprendre l'anglais:

a. me permet de devenir un bon médecin.

b. me permet d'avoir des informations récentes dans le domaine de médecine,

c. me permet de suivre une spécialité a l'étranger,

d. me permet de trouver du travail a l'étranger,

e. autres (précisez)

28- En tant que médecin apprenant l'anglais vous avez vécu certaines situations particulières, indiquez ici une ou plusieurs réponse(s) relatives à la finalité de l'utilisation de l'anglais pour:

a. comprendre des conférences et discussions,

b. lire des rapports médicaux,

c. lire des livres de médecine qui sont difficiles,

d. lire les modès d'emploi des médicaments et des équipements/matériels médicaux,

e. écrire des rapports en anglais à des collégues étrangers,

f. prendre des notes durant des congrés et colloques en médecine,

g. écrire des articles élaborés en anglais pour être publiés dans des revues internationales,

h. donner une conférence durant un congrés/colloque,

i. écrire des lettres ordinaires à des amis,

j. autres (précisez)

29- Choisir une ou plusieurs réponse(s) parmi les choix suivants pour répondre à la question:' J'utilise l'anglais en dehors de mon activité professionnelle:

a. pour mon propre plaisir,

b. pour écouter des programmes anglophones à la radio,

c. pour comprendre les programmes TV qui sont en anglais,

d. pour pouvoir discuter avec des étrangers

e. pour pouvoir lire des journaux et magasines en anglais.

f. autres (précisez)

30- Avez-vous des suggestions a formuler concernant les enseignant(e)s d'anglais du point de vue pédagogique et du point de vue contenu de livres a publier?

APPENDIX TWO

Format for the in-depth interviews

PART A

1- Identify the members' purposes and aims in the community
2- Identify the stage reached for the furtherance of their purposes/aims
3- Identify the language used for the achievement of these purposes/aims

If members perceive the use of English as relevant

4- Identify the relevance of this language in:
    a) Research; for personal development
    b) Teaching; for transmission of knowledge to new-comers in the community
    c) Clinical work; for getting patients healthier
5- Identify the frequency of English use for the achievement of their purposes/aims

However, if any of these purposes/aims (or all of them) are achieved through a use of another medium

6- Get the members' perceptions on the effect it has on the achievement of these purposes when English is not used

If English is perceived as essential for medical information but is not used

7- Get the respondents' perceptions on the reason for not using it
8- Identify any impediment of any nature for accessing information written in English

If English is used, get the respondents to give their perceptions about

9- The range and timing of reading medical information in this language
10- The strategies and sequence of reading medical information in this language

PART B

11- Get the interviewees to talk about their scientific participation which includes:
    a) Presentation and/or publication of a scientific paper
    b) Place and time of presentation and/or publication
    c) Language used to achieve their objectives

If scientific participation is only local or national,

12- Get the respondents to give their perceptions on what blocks them from participating internationally

PART C

13- Identify the respondents' sources of information access
    a) Local/national libraries
    b) International libraries
    c) Subscriptions
    d) Internet
    e) Any other channels

14- Identify in which language was access to information more available to achieve their purposes.
15- Get the respondents to talk on any perceived difficulties encountered through the selected channels

PART D

16- Get the interviewees' opinions on the importance of social network within a community
17- Get the interviewees to talk on the nature of relationship that exists among the members of their community
18- To talk about their roles within the community and outside it
19- Their roles and obligations towards other members
20- Identify the elder members' perceptions of the younger ones