

Towards an ESP Hybrid Teaching Model for Moroccan Engineering Students: Case Study of the Higher National School of Arts and Crafts-Casablanca Hassan II University

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Abstract: Morocco's economic development depends largely on the ability of Morocco to gain access to a diversity of markets for which English happens to be a lingua franca. Hence, future decision makers, mainly graduates of higher specialized institutions, should be equipped with an adequate level of English enabling them to negotiate to gain more markets. However, to attain this major objective, the teaching of English in these vital and strategic institutions needs further refinements in terms of curricula that respond to both students' and the country's needs, provisions whose learning outcomes meet international standards and mainly the Common European Framework. English classes in higher institutions receive mixed ability students whose level ranges between elementary and upper-intermediate. They receive a one-size-fits-all input that is designed and implemented by their tutor. This state of affairs does not enable low-level nor high-level students to grow. Alternatively, there is a need for a model that can meet the wide range of needs of current learners together with the expectations of the country. This model is based on differentiation and systematic planning which mainly respond to different students' individual needs in the hope of resulting in their progress.

Keywords: ESP model, English for engineering, hybrid learning, Higher education

1. Introduction

English is gaining momentum in Morocco over the last two years (e.g. Minister of Higher Education, 2013). However, it is easily noticed that English does not serve the priorities stated in Morocco's Growth Strategy for 2025. This strategy relies on developing different science and technology sectors in which English does not receive due attention. To this end, great efforts are made to improve provisions of science, engineering, and management schools to enhance the quality of training and scientific research. However, little focus is put on English in these disciplines which are the bases of preparing human resources for key positions and leadership in the country.

Engineering, commerce, management and technology schools are considered to be key institutions for the training of leaders of tomorrow in Morocco. Therefore, It is strongly believed that English can play an important role in keeping in grips with advances of research and innovations in these areas especially that our country is seeking other opportunities via the conquest of new markets in which English is used as a lingua franca like the Middle East, Asia, and Africa.

The teaching of English in higher engineering institutions remains a big challenge in the absence of English departments in such institutions. Hence, such teaching should be more structured in order to place English provisions within the framework of the National Strategy for 2025. By doing so, it will contribute to the development of the country.

In fact, higher engineering institutions in Morocco are still striving to establish clear-cut precincts between ESP and GE. Moreover, most of the English language teachers do not understand the real needs of engineering students. However, the teaching of English in such specific context has to be motivated by the necessity: of a common basis for the making of language programs; the design of exams and textbooks; a descriptive frame to delineate the learning objectives of a language to use to communicate; to set down the knowledge and the

skills to acquire in order to possess an efficient linguistic behavior (CEFRL, 2001, p.9).

2. Statement of the problem

Our starting point is a core issue: the teaching of English in the Higher National School of Arts and Craft-Casablanca (ENSAM) is particularly dealing with mixed ability students who learn at a different pace, have disparate prerequisites, and adopt different learning styles and strategies. Therefore, teachers need to adopt an inclusive learning model that will enable them to design more appropriate courses, and to provide a high quality training that can level up the performance of the students in need of more boost to catch up with their peers together with responding to different students' needs.

In order to handle the aforementioned challenge of mixed ability classes and to meet the diverse specific needs of engineering students, a hybrid teaching system is proposed. Indeed, in a context of high academic competition, the higher education engineering institutions such as ENSAM-Casablanca, which is considered as a driving force for development, will have to undergo some changes regarding the teaching of English. Indeed, ESP teachers in such institutions will have to cater for all the identified discrepancies and needs as well as to provide opportunities for the students with different learning styles to learn in their own ways, in their own time, and in a supportive environment.

3. Research questions

The current research aims to cover three main objectives. Firstly, it describes the state of the art of English teaching in these higher institutions where there are no English departments. Secondly, it will suggest an ESP teaching model based on hybrid learning (face-to-face and online) that will enable EL teachers to implement a rigorous plan whose aims are two-fold: (a) remedy the students' deficiencies at the entrance to schools and (b) improve students' levels to enable them to take content classes in their specialty. Thirdly, it will evaluate the effectiveness of the proposed model by conducting an experiment within the National Higher

School of Arts and Crafts-Casablanca. Based on these objectives, the following research questions can be formulated:

What are the main factors affecting EL teaching in engineering schools?

What ESP teaching model can be implemented in these institutions?

What are the constraints related to the implementation of an ESP model in engineering schools?

What is the impact of such model on both engineering students and teachers?

4. Methodology

In order to investigate the abovementioned questions, our survey has adopted a mixed method approach in a sequential explanatory design. (Creswell, 2012).

First, the research starts with a diagnosis test that informs teachers about the actual situation of their learners and then enables them to plan an effective ESP course. Secondly, questionnaires are administered as a source of primary data collection. The structured questionnaires (both open and closed questions) are used to collect facts and figures from ENSAM-Casablanca students. (Creswell, 2013).

The participants represent three engineering departments within ENSAM namely the electrical, the mechanical, and the industrial departments. From each department, 20 students were selected randomly from different levels. As for the interpretation of these two types of data, it will be in tables, graphs and in narrative.

The study has been carried out since September 2018 (Placement Tests). The questionnaire, aiming to evaluate the degree of engineering students' satisfaction within the experimental ESP hybrid model, was administered to the targeted population via Google form. Data from the questionnaire was collected as from February the 1st to March the 1st, 2021. The gathered data showed that all the 60 students answered the questionnaire.

It is worth noting that ethical matters are taken into consideration when devising questionnaires and sitting for interviews. Participants have the choice to participate or the right to withdraw at any stage of the survey.

A written consent request was sent to the school to show their interest in participating in the survey.

All the participants were told about the confidentiality and anonymity of data.

5. ELT in non-English departments

Since the application of the reform in Morocco in 2003, the teaching of foreign languages is constantly being renovated. With the advent of the 2009-2012 emergency plan, the Common European Framework of Reference for language learning and teaching played a unifying role in the design of the Academic Description of the teaching of English in university. Indeed, though the Description is recommending the use of specific textbooks namely “New Head Way and Cutting edge”, ELT professors in non-English departments are still in need of designing programs for the teaching of English from the CEFR in the form of customized courses.

With the establishment of the Description of specific English teaching, teachers teaching ESP in non-English departments i.e. Moroccan science faculties and higher specialized institutions, are asking themselves certain questions; Are we trained or prepared to teach ESP classes? What approach should we adopt? Do the available teaching resources as the recommended course books match with learners’ needs as well as the institution’s learning goals? How to create ESP courses respecting the principles of the CEFR and with what margin of freedom? Does the framework make it possible to revitalize methodological tools for ESP teaching? These questions are now at the heart of the concerns of ESP teachers in non-English departments.

The use of a Descriptive Framework for English Teaching in Non-English Departments was a significant paradigmatic shift: we moved from a communicative approach to an action-

oriented perspective, sticking just to the most important change. ELT teachers are meant to apply the action-oriented approach in language teaching as adopted by the Common European Framework of Reference for Languages (CEFR). The Descriptive Framework is presented here as an illustration of a possible and current application of the action-oriented perspective. The tasks proposed in the Detailed Contents of the Different Levels of English Language Teaching are nevertheless of a social nature (in the sense that it is an "authentic" task in a given social context, which here is that of higher education).

Thus, from this state of affairs, we will try to shed light on the paradigmatic change in the teaching of English by trying to define the new type of teaching put in place, which is supposed to solve the problem of the teaching of English raised in higher specialized settings.

6. New conception of English teaching in Morocco

It goes without saying that the teaching of the second privileged foreign language in Morocco has undergone many changes both in terms of the objectives which are now assigned to it and its pedagogy as evidenced by the abundance of textbooks and the publication of ministerial instructions and descriptions. Thus, we note in the instructions of 1987 the following: "We are not only aiming at mastering the properly linguistic system with its grammatical, lexical, phonological structures, etc., but also to act through language, to use language in a specific situation ”.

We can say that the conception of the teaching of English has changed a lot: grammar, rhetoric and literature have given way to communicative situations, to speech acts, to the pragmatic aspect of the language; in other words to learning based on practice. Indeed, the appearance of language didactics makes the teaching of languages, especially foreign languages, an autonomous field which draws on all the language sciences (linguistics, sociolinguistics, semiotics, etc.), while developing its own pedagogical and methodological research.

As a result, the change of the teaching of English from secondary to higher education generates a paradoxical situation which risks hampering the integration of science and engineering streams students into scientific research and future vocational challenges, hence the search for an appropriate approach that can correspond to this new student profile in order to accomplish the mission assigned to languages in general and in better conditions.

It is worth noting that several approaches have been undertaken following the reforms affecting the teaching of English in higher education without, however, achieving the expected results. If the Moroccan university has formalized and spread the teaching of the “English” module all over its higher engineering institutions, it is because working life requires and will require sufficient mastery of English, in reading and writing, but also in terms of comprehension and oral production. Note that the Moroccan science faculties have embarked, since the university reform, on the path of specialized English.

7. Teaching English for specific purposes in the Moroccan university

In recent years, we have probably witnessed the opening of a new page in the history of English of specialty in Morocco, with the emergence of a new social and political context: English for Specific Purposes (ESP).

The good integration of students into the university curriculum, especially when it comes to scientific and engineering fields, requires a solid command of English: accessing the different contents of scientific discourses suggests a good macro-syntactic perception of teaching tools: courses, handouts, question papers, authentic documents. The Moroccan university context constitutes the prototype of the conditions for the establishment of the teaching of specialized English, hence; this teaching can be subscribed to an ESP process.

The linguistic difficulties students encounter, when they are confronted with a written or oral scientific discourse, are not reduced to the lexicon but more to the structure of the discourse,

that is to say all the stages that lead to the macrostructures: reasoning, demonstration, description. The acquisition of the specialty language is advocated simultaneously and in interdependence by the acquisition of knowledge.

ESP offers the great advantage of acting quickly and efficiently by precisely targeting the communicative situations and the linguistic forms specific to each discipline in order to isolate them and then transform them into a didactic activity. The course designer must develop his course from the authentic documents of the learners, on the one hand to put them in contact with their discipline and on the other hand to allow them to develop their language skills in their field. This means that the entry point of instruction start from a highly interesting and motivating environment for the learner which is in this case their field of expertise.

8. Findings and discussion

8.1 Placement test

The main objective of the ENSAM Placement Test (see Figure 1) is to place a student according to the levels defined by the framework. In fact, these levels, above all, allow the institution to take the student to the group that is most appropriate for them. Once the results are relayed to the teacher, they can then establish a diagnosis of the student's skills and also anticipate his/her behavior in order to bring the learner to the desired goal. Having the learners' test results in hand also gives the teacher the opportunity to choose their educational objectives and therefore to be able to put up their teaching plan. Consequently, making the teacher aware of the learner's situation gives the former the opportunity to reflect not only on his/her own teaching approach but also on the organization of the course. Finally, the third beneficiary is the learner, in the case where the latter has access to the corrected test, he/she can realize their achievements and their non-achievements, their strengths and weaknesses in each skill assessed. By sharing the results with the main stakeholder, the opportunity is given to him/her to know where they are in their learning. They can then measure the efforts that remain to be made in a given area.

Since the application of the emergency plan in Morocco, at the start of the course, students should take a computer positioning test. The computer tool in the assessment is not only used to transcribe onto the computer what can be done on paper. Ergonomics, time management, connection or loading of various audio and video materials are all factors that make it possible to offer innovative assessment materials that align with developments in course materials. Computerization also saves the teacher's time because it is a closed task; the correction of the items is done by the machine. Finally, it makes it possible to save documents in compact form, which is advantageous on the one hand, in terms of space, for the institution carrying out the tests and, on the other hand, it facilitates statistical work e.g. checking the progress of a student or a group of students.



Figure 1: The placement test platform

This test does not result in a grade, but it must assess the needs of the students, it is a starting point to implement the learning and ensure a dynamic progression of the student (see Figure 2). The assessment takes the form of a multiple choice test allowing students to be placed on a standardized scale of skill levels according to the Common European Framework of Reference (CEFR). Moreover, the design and the production of this test are inspired by the theoretical approach provided by the Common European Framework of Reference for

Languages. This test will make it possible to cognize the profile of the students by diagnosing their difficulties and estimating their mastery of language skills, to determine groups of levels and to set up an integrated personalized monitoring system.

The results of the placement tests, carried out so far on 2500 students, at ENSAM-Casablanca place the majority of students in the elementary levels (see Table 1). Most of them are at levels A1 and A2; a minority is at level B1. ENSAM-Casablanca, according to the test results, is in a situation where arrangements must be made so that progress at the lower levels will be made visible.

Placement test by levels	Academic year 2018/2019	Academic year 2019/2020	Academic year 2020/2021	Total
Level A1	140 (35%)	552 (60%)	472 (40%)	1164 (46,56%)
Level A2	260 (65%)	184 (20%)	295 (25%)	739 (29,56%)
Level B1	0	138 (15%)	236 (20%)	374 (14,96%)
Level B2	0	46 (5%)	177 (15%)	223 (8,92%)
Total	400 (100%)	920 (100%)	1180 (100%)	2500 (100%)

Table 1: placement test results of ENSAM students

8.2 Discussion of the placement test results

The results of the placement test reveal the fact that EL teachers will have to deal with the phenomenon of mixed ability classes. The results make it clear that the discrepancies being divulged by the placement test should be handled with care so that the gap would not widen along with the learners' progress. In fact, we are dealing with students who are expert in their fields and/or who can perform specific tasks adequately in their mother tongue; the English teacher's duty is to equip them with the skills needed to do this in the English language. However, the first constraint facing English teachers in this situation is that most learners started English in high schools or might have been enrolled in language centers and would definitely perform differently when they reach engineering schools. In order to handle this delicate situation, a policy that responds to the students' needs should be considered. This policy should be meant to be more inclusive by attempting to level up the performance of the students in need of more boost to catch up with their peers together with responding to different students' needs. The first is to implement two phases in most of the English classes as the following table shows:

Classes	Phases		Remarks
1st Y Preparatory Cycle	A1/A2	B1	Placement test
	Phase1	Phase2	
2 nd Y PC	B1/B2	B2	Language proficiency test 1
	Phase3	Phase4	
1 st Y Engineering Cycle	B2	ESP1	Language proficiency test 2
	Phase5	Phase6	
2 nd Y EC	ESP2	ESP3	Language proficiency test 3

	Phase7	Phase8	
3 rd Y EC	Preparation for International Exams	International exams (TOEFL /TOEIC...)	

In the first year of the preparatory cycle, most of the students have already studied English for at least three years and therefore should fit in Phase 2. The outcomes of the placement test will enable teachers to place each student in the right level. Students whose levels fluctuate between A/1 and A/2 will be put in phase 1. The use of a GE textbook will enable the learners to catch up with the more proficient language users who are thus put in Phase 2. By the 2nd year PC, all the students must be in Phase 3(B1) and those who have progressed quickly can take Phase 4. The ultimate goal is to get everyone to reach B2 and that after passing the first checkpoint by the end of the 2nd year PC. The rationale behind setting this maximum level (B2) is to enable students to follow specialized input in the two first years of the engineering cycle and to pass an international English language test (TOEFL/TOEIC) by the end of the third year EC .

Obviously, to support students with linguistic difficulties to move from level A2 to level B1 a differentiated pedagogy is inevitable. However, in such a highly demanding context, Moroccan engineering schools receive a massive number of students whose needs diversify and increase as long as this mass grows. Hence, it is necessary, and even indispensable, to implement training systems that can meet the wide-ranging needs of current engineering learners. The approaches that offer the most autonomy to the student, and which are highly praised, are definitely those revolving around the use of technology and online components. Consequently, it is obvious that the computing tool has to be used as a supplement to improve this situation and that a Hybrid Teaching Model can represent both an effective and efficient strategy in order to enhance the teaching of English in engineering schools.

9. Presentation of the experimental hybrid model

Indeed, to insure that engineering students realize a dynamic progression, and with a view to ride out their linguistic difficulties, a hybrid training, adapted to the needs of students, has been implemented. To be more specific, part of the face-to-face training should be replaced by micro-tasks which will take place remotely; taking as a basis a suggested EST University handbook. These tasks are made available to students on the ENSAM CASABLANCA E-LEARNING platform (ECEL). For A1 level students, there is a GE program specific to this category of students that initially aims to bring them to A2 level.

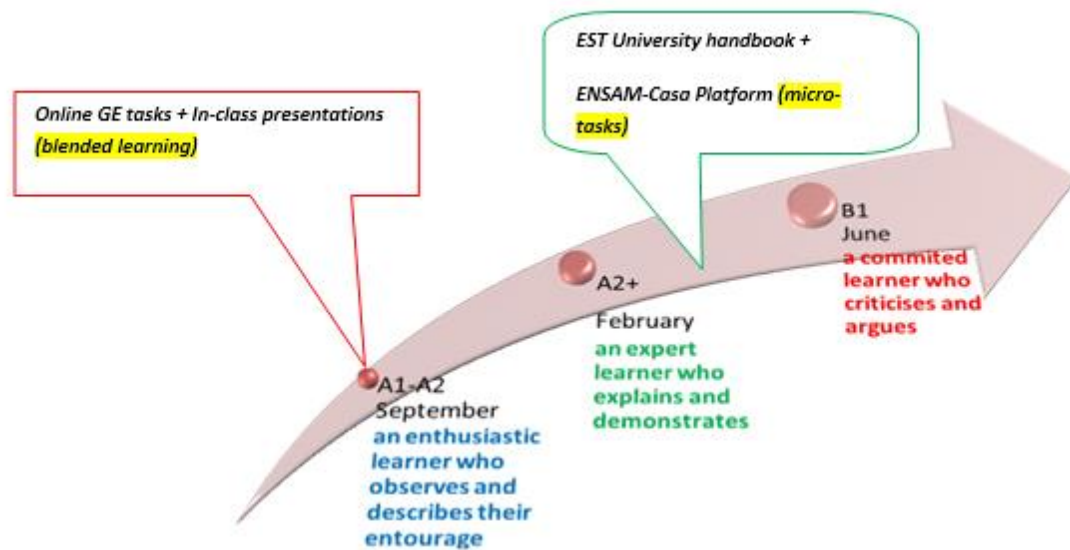


Figure 2: Dynamic student progression via the hybrid model

9.1 Presentation of the techno-pedagogical environment (ENSAM-C E-Learning)

ENSAM-Casa E-learning is a learning platform which is built by the Moodle project. It is regarded as a computer system designed to optimize, via an Internet network, the management of all training activities, from the registration of participants, until the distribution of resources, the organization of individualized courses, the monitoring by the tutor, and the animation of learning communities. ECEL is a graphic interface based on the open-source learning

management system (LMS). It is looked at as a private website that allows both the provision of online courses and learning in small groups. It is designed in such a way that educators can prescribe the content of learning, be it individual or in a group, incorporate multimedia teaching resources and monitor students' activities. In addition, this support offers many features that bring a real added value to a course e.g. from the simplest function of document deposit to the development of online tests. ECEL is therefore a virtual architecture ideally transposing a real workspace.

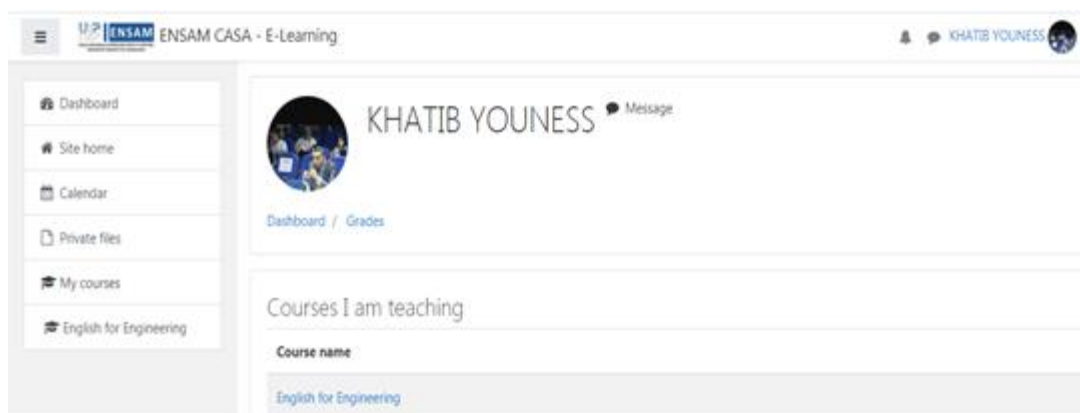


Figure 3: The ECEL Platform

The objectives of these online courses enable engineering students to remedy their linguistic difficulties by helping them to become aware of their shortcomings, to correct them and to promote autonomy in the learning of a foreign language.

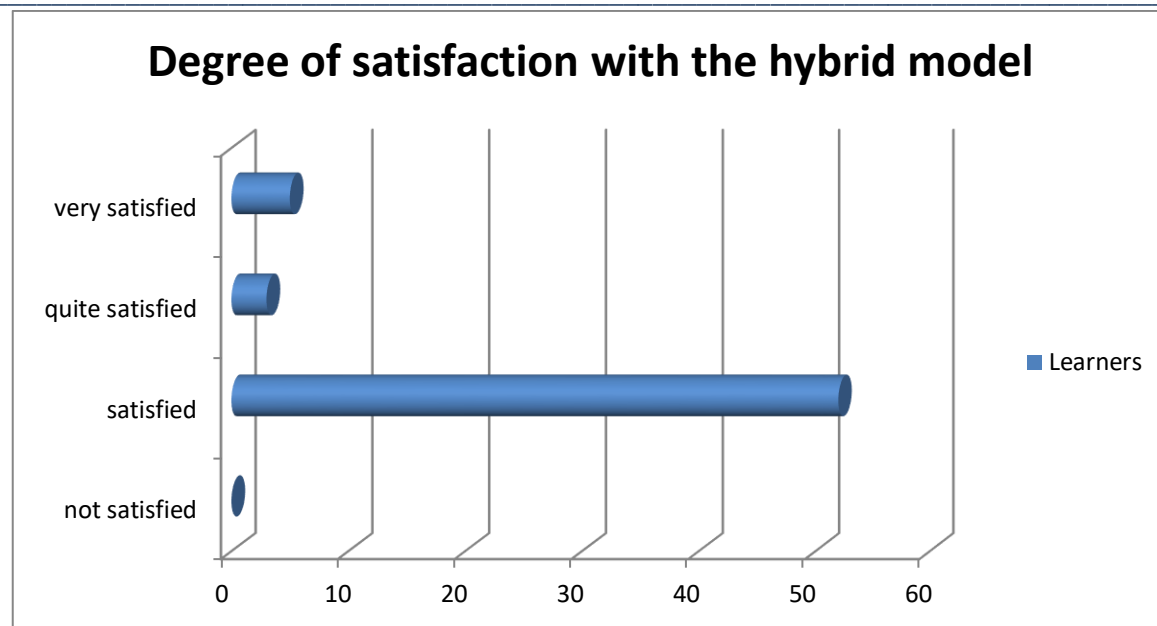
From a pedagogical point of view, the platform allows distant monitoring of engineering students by their language teachers via synchronous or asynchronous means of communication. These means of communication (email, forum and chat) are essential tools for online learning. In addition, the first session of the semester was devoted to the presentation of the tools, activities and resources of the ECEL© platform. To allow everyone to work and discover this support at their own pace, the platform and its tools were then presented to the students, the session took place at the Multimedia room under the supervision of computing

teachers from the Industrial department. This made it easier to identify students who were uncomfortable with technology and we were able to provide them with personalized support. The Student will find resource documents submitted in PDF or Word format containing grammar guides, vocabulary sheets, and links to online exercises.

According to their needs, the student will deepen or revise the topics discussed in class. At the end of each lesson, a self-corrective assessment is offered to students on ECEL© (self-assessment process by the student for their own learning).

9.2 Evaluation of the first experiment via the ECEL platform

The evaluation of the hybrid model via the ENSAM CASABLANCA E-LEARNING platform (ECEL), in the academic year 2018-2019, showed the usefulness of the platform (52 students from the three engineering branches were satisfied with the training system). Moreover, taking into account their technical learning context, the hybrid system enables students to discover their latent ability to cope with specialized language. The student is no longer confined in a primitive space where their only hope to understand the input is via the teacher. Supervision of students should not be limited to initial "technical" explanations, but genuine guidance of the student throughout their hybrid learning journey seems to be essential. Indeed, the hybrid system offers ESP teachers the opportunity to focus on how their students are learning and not how much they have learnt.



Graph 1

Seeing that the essence of ESP revolves around the revolution of needs analysis, Asynchronous mediatised online teaching guarantees the student a customized work pace as long as they have their own IT tools. Otherwise, and this is still the case for many of them, the learner will be dependent on the ESP teacher and the constraints related to their personality (timidity, anxiety, fear of making mistakes ...etc.). This dimension should be considered. In my scenario, I favored oral activities to be in face-to-face settings whereas the written ones will be on-line. However, in the practice of the course, this relationship between face-to-face and on-line should be well communicated in the classroom to the students. The mechanical exercises, multiple choice questions or pairing (association of elements) are part of a behaviorist pedagogy which aims at the appropriation of the structures of the language by drills. Indeed, the treatment of the error sets a real challenge here because these exercises do not offer sufficient feedback that would allow the student to understand their error. The exploratory and analysis phase in the classroom reveals all its importance here. It is therefore important to clearly indicate in class to students the nature of the documents they can find on ECEL and to point out the resources to be consulted at the platform level.

It turns out that the students do not or hardly refer to the documents made available to them. Initiate learners to use mediatized resources outside the classroom setting. So, to get learners used to referring to these resource documents, we could, at the end of the session, recall which ones to consult by briefly presenting them.

For on-line activities, we encountered the problem of organizing homework and correcting it. While this tool makes it easier for actors to monitor the activity (in terms of homework rendered or not), it does not provide feedback to students in the form of commented copies (by underlining errors in particular). Finally, at the current state of our system, it is difficult to follow students in the progress of their distance learning. We could remedy this by creating a portfolio setting the self-learning objectives for each sequence with regard to the content of the personal learning notebook and the exercises offered on ECEL.

During the first ECEL experiment, our program was provisional and we adjusted it as the semester went on. Also, at the start of the semester, we posted the activities to be carried out online every week. Very quickly, the students told us that this deadline was far too short and that they needed to be able to organize themselves longer in advance.

The statements of the students concerning the quality of the activities submitted by the teacher at the level of the ECEL platform and its articulation with the face-to-face, underline certain limits of this experiment.

Accordingly, reaching the end of the second semester of the year 2018-2019, we reviewed the final program through which the students had gone, in order to spot the modifications to be made in the planning of the English for Engineering course of the following year, based on the problems we encountered and the remarks made by the students during the first experiment via ECEL. During the second semester of 2019/2020, our planning has therefore changed, it has undergone adjustments in order to best adapt to the requirements of such a course while

taking into account the needs and the constraints of students. These adjustments in our 'English for Engineering' course program are mainly made during the current academic year 2020-2021, and during which, we frequently ask the students to give us their opinion on the hybrid system, and regarding the workload, the planning or the content tackled.

10. Conclusion

The ESP hybrid teaching model proposed in this study seems to be an effective system that will bridge the gap between the institutional constraints and the pedagogical practices so as to consolidate a clear ESP policy for engineering students in the future. Through this model, EL teachers in engineering institutions have no choice but to integrate technology and to make use of digitization and ICT. However, in Morocco, EL teachers seem reluctant to exploit new systems based on technology despite the fact that much effort has been made to further promote the development of e-Learning and to make the hybrid system operational within the Moroccan engineering schools so that they would be on the same footing as their international counterparts. The choice of this system will grant Moroccan engineering students a latent period to develop autonomous learning.

By working on a network or alone on the computer, some students who are not used to learning autonomously would be tempted to abandon the program at the slightest difficulty. It is therefore appropriate within the framework of the hybrid system to involve trainers capable of designing well-structured programs enabling learners to exploit their time efficiently. Online tutors must also be competent to better support students' commitment.

Among the most important constraints facing the implementation of the hybrid system at present are those of an organizational and pedagogical nature. We believe that the hybrid system if associated with supreme supervision and mentoring will be able to overcome these constraints and help engineering students develop their language and communicative competence.

However, the ESP teacher, as competent as they may be, cannot be effective, without setting up normative systems regulating the e-learning project, and including formal elements such as laws, structures (e.g. a language lab), The number of tutors should, for example, be proportional to the number of learners, the calculation of the teaching hours, the reward systems, etc. A prerequisite is therefore to institute an ethical organizational climate for the e-learning project that influences the ESP teachers' decision-making. Teaching is often the last thing designers of learning systems are interested in, only concerned with, technological solutions.

References

- Akyol, Z., & Garrison, D. R. (2011). Understanding cognitive presence in an online and blended community of inquiry: Assessing outcomes and processes for deep approaches to learning. *British Journal of Educational Technology*.
- Aniko, T. (1999). Needs Analysis Carried Out to Identify Genres Used by Engineers. Unpublished Report, University of Manchester.
- Abdellaoui, N. (1982). ESP at the 7th form Level. In Benhallam, A. (ed.) *Proceedings 2nd MATE Conference*
- Abouabdelkader, H. (2000). ESP in Morocco. In Zaki, A. (ed.) *The New Education Reform in Morocco: The Role of English, Proceedings of the XXth MATE Annual Conference*
- Ahellal, M. (1995). Challenges: some food for thought. In *MATE Newsletter*, Vol. 16 (3), 1.
- AL-Salman, S. M. (2001). The Status of ESP in a Global Society. In Zaki, A.; Belaraj, M.; Najbi, M. and Zizi, K. (eds.) *ESP and the Challenges of Globalisation, the First Mediterranean ESP Conference*
- Anderson, C. (2001). Subject Knowledge and the ESP Professional. In Zaki, A.; Belaraj, M.; Najbi, M. and Zizi, K. (eds.) *ESP and the Challenges of Globalisation, the First Mediterranean ESP Conference*
- Azenoud, A. (2001). Developing an E.S.P. Course: The case of E.N.S.A.M. In Zaki, A.; Belaraj, M.; Najbi, M. and Zizi, K. (eds.) *ESP and the Challenges of Globalisation, the First Mediterranean ESP Conference*
- Anthony, M. (1975). *English for Special Purposes - A Lexical Content*. In Richards, J. (1975) (ed) *Teaching English for Science and Technology*. Singapore: Singapore University Press.
- Bailly D. (1997). *Didactique de l'anglais. Objectifs et contenus de l'enseignement*. Paris : Nathan.

-
- Bahloul, J. and Bahloul, M. (2001). The ESP 'Crusade': 'Anglifying' Carthage. In Zaki, A.; Belaraj, M.; Najbi, M. and Zizi, K. (eds.) ESP and the Challenges of Globalisation, the First Mediterranean ESP Conference
- Belaraj, M. (2001). Using Authentic Video Materials in the ESP Classroom. In Zaki, A.; Belaraj, M.; Najbi, M. and Zizi, K. (eds.) ESP and the Challenges of Globalisation, the First Mediterranean ESP Conference
- Chapelle, C. (2001). Computer applications in second language acquisition: Foundations for teaching, testing and research. Cambridge UK: Cambridge University Press.
- Degache, C. (2006). "Aspects du contrat didactique dans une formation plurilingue ouverte et à distance". In C. Dejean-Thircuir et F. Mangenot (dirs.). Les échanges en ligne dans l'apprentissage et la formation, Le Français dans le Monde, Recherches et Applications. pp. 58-74.
- Dudley-Evans, A. & St. John, A. M. (1998). Developments in ESP: A multi-disciplinary approach. Cambridge: Cambridge University Press.
- Ellis, R., (2003). Task-based Language learning and teaching. Oxford University Press : Oxford.
- El Madmad, K. (1988). Teaching ESP at the Faculty of Law. Zaki, A.; Boumoussa, A.; Najbi, M. and Mehdi, S. (eds.) ELT in Morocco: Directions for the Nineties. Proceedings of the eighth National Conference.
- El Haddad, E. M. (1989). Teacher Training in ESP: The Attitudinal Problem. Ouakrime, M. and Zaki, A. (eds.) English Language Teaching: The Maghrebi Experience, Xth MATE National Conference
- EL Haddad, E. M. (1990). Teacher training in ESP; some implications for course design. In Saib, J. (ed.) English Language Teaching in the Maghreb: Current Issues in Evaluation, Proceedings of the XITH MATE Annual Conference
- Ennaji, M. (1997). The ESP teacher in the private and public sectors. In El Haddad, E. M.; Najbi, M.; Ait Ali, A.; Guelzim, R. and Imad, E A. (EDS.) ESP in the Arab World: Reality Check and Prospects, Proceedings of the XVIIth MATE Annual Conference
- Ennaji, M. (1998). Using Technology as a Teaching Material. In Hassan El Boustani, Mohammed Hassim, and Susan Thornhill (eds.) Issues in English Teaching Materials. Proceedings of the 18th MATE Annual Conference
- Erguig, R. (2006). Public high-school teachers of English and information technology. In MATE Newsletter, Vol. 27 (2), 7-15
- Fathi, S. (2001). From EAP to ESP: The Necessary Shift in the Moroccan University Syllabi. In Zaki, A.; Belaraj, M.; Najbi, M. and Zizi, K. (eds.) ESP and the Challenges of Globalisation, the First Mediterranean ESP Conference
- Freeman, D., & Johnson, K. E. (1998). "Reconceptualizing the knowledge-base of language teacher education". TESOL Quarterly. n° 32, pp. 397-417.

-
- Hutchinson, T. & Waters, A. (1983). Creativity in ESP materials. In *Issues in ESP*, Lancaster: Lancaster University Papers.
- Hutchinson, T. & Waters, A. (1987). *ESP: A Learning Centred Approach*, Cambridge: Cambridge University Press.
- Mackay, R & Mountford, R.J. (1978). *The Teaching of English for Special Purposes : Theory and Practice*. In Mackay, R. & Mountford, R.J. (eds) *English For Special Purposes*. Harlow: Longman.
- Hassim, M. (2002). An Overview of MATE Two-Day ICT Colloquia. *MATE Newsletter*, Volume 23 (2), 7-10
- Hassim, M. (2003a). Teacher Training in ICT in Morocco: MATE Experience. *Proceedings of the 22nd MATE Annual Conference*, 125-133.
- Hassim, M. (2003b). MATE Asynchronous Online Conference on in-service teacher training. *MATE Newsletter*, Volume 24 (1), 5-8
- Khaldi, K. (1990). Do we need an ESP component in the curriculum of the licence? In Saib, J. (ed.) *English Language Teaching in the Maghreb: Current Issues in Evaluation*, *Proceedings of the XITH MATE Annual Conference*
- Khuwaileh, A. A. (1996). ESP after thirty years: An overview of the position of ESP in the 1990s. *Linguistica*, Vol 36 (1), 103-110
- Lamtara, S. (2011). *Information communication technology integration in the Moroccan educational system: Focus on high schools*. Unpublished master thesis. Casablanca: Faculty of Letters and Humanities Ben Msik