Original article

The integration process in English courses for specific purposes from the Common European Framework of Reference for Languages

Silvia Miriam Morgan Scott[1*] https://orcid.org/0000-0002-2776-9587

Wilfredo Carbonell Limonta[1] https://orcid.org/0000-00030825-3419

Adys María Nassiff Samón[1] https://orcid.org/0000-0002-8239-5821

[1]Universidad de Guantánamo. Cuba

*Autor para la correspondencia: mmorganscott@gmail.com

ABSTRACT

This article provides a didactic proposal aimed at improving the teaching-learning process of English courses for specific purposes from the new policy assumed for the learning of English as a foreign language, which has implied assuming new challenges and trends for its development in the training of different professionals in the context of the current Cuban university. It is assumed as theoretical support the integration of communicative and professional skills of the Informatics Engineering career based on the Common European Framework of Reference. Theoretical and empirical methods were used to synthesize the most relevant sources on the subject.

Keywords: Integration; Skills; English for specific purposes; Common European Framework of Reference

Introduction

The transformations in the Cuban Higher Education, as a result of the process of improvement in which it is immersed, have led to substantial changes in the direction of the process of comprehensive training of professionals; so that the mastery of English as

one of the languages of wider international diffusion becomes a strategic objective of this training, particularly in light of the needs and projections of the country's development.

Since 2015, the Ministry of Higher Education in Cuba, introduces the national English policy, which establishes the gradual incorporation into the curricula of all careers the approval of the mastery of the intermediate level of that language equivalent to Bl as a graduation requirement for students, following the structuring by levels established from the Common European Framework of Reference for Languages (CEFR) (Harsch, 2020).

From that moment on, the process of teaching, learning and evaluation of English begins to be resized for the training of students in all university careers, taking as a reference both the rich Cuban pedagogical tradition and the international trends and standards of the CEFR. This system of objectives by levels guides the work in the national context and constitutes a common base of reference for the elaboration of course programs, counseling, self-learning and evaluation, both standardized and non-standardized. Ministry of Higher Education (MES, 2019).

Hence, English language teaching in universities in Cuba has also been involved in an evolutionary process of methods and approaches to achieve language proficiency according to the challenges, requirements and needs demanded by the development of society. These approaches have been aimed at training a professional capable of communicating effectively in this foreign language, within the framework of his or her work and professional activity.

English language training of students in higher education is developed simultaneously in three directions, one of them is intensive training through a system of courses for general purposes and specific purposes, as well as other academic services, which are offered in universities outside the Teaching Process Plan. (MES, 2019)

The logic of the teaching-learning process of English for Specific Purposes (EFP) courses in the Computer Engineering career has also been involved by the evolution of methods and approaches, to achieve a command of the language according to the challenges, requirements and needs demanded by the development of society for the formation of a professional able to communicate effectively in this foreign language to solve the professional problems of their sphere and fields of action.

The approach to the solution of the problems, as their causes are multifactorial, provides a result that is erected in effect causing new professional contradictions of greater complexity. Therefore, such solution demands a process of integration of the referred skills in the teaching-learning process of EFP courses that allows the student of Informatics Engineering a contextualized communicative interaction, as an element that contributes to the development of linguo-infotechnological communication.

The professional contradictions reveal the relevance of a process of analysis of the communicative needs. These needs are understood as the deficiencies that emanate from the relationship between the professional problems to be solved by teachers and the social and individual needs of the aforementioned students.

Thus, it is necessary to deepen the interdisciplinary links in order to understand the particularities of the referred integration, not sufficiently addressed by the Didactics of Foreign Languages, thus emerging the need for theoretical constructs to favor the integration of skills that favor the systematization of textual and interdisciplinary analysis and its contextualization in the development of linguo- infotechnological communication.

Development

In the analysis of the systemic character of the teaching-learning process of EFP courses based on the CEFR, its diachronic relationship with the subjects of the General English cycle that precedes it and its synchronic relationship with the subject Database, object of research, belonging to the DPI Software Engineering and Management, is recognized.

Consequently, a didactic conception of the integration of communicative and professional infotechnological skills is proposed, which contributes to the improvement of the student's ways of acting, by means of the so-called integration as a fundamental category of the teaching-learning process of EFP courses.

This didactic conception is structured in two basic subsystems: linguo-informatics interactive instruction and linguo-infotechnological contextualization.

The interactive linguo-informatics instruction is composed of three components of didactic nature: linguo-informatics articulation, communicative textual articulation and infotechnological contextualized interaction, and it is in charge of facilitating the interdisciplinary link in the learning of the linguistic knowledge in English language necessary to understand and produce messages inherent to the infotechnological processes. Moreover, the homeostatic interrelationship between the synchronic and diachronic communicative connections is manifested in it, from the internal relationship between the didactic components of the teaching-learning process of IFP courses.

Therefore, interactive linguo-informatics instruction is defined as the process that propitiates the integration of communicative skills and infotechnological professionals from the interdependence relationships between the objectives, content and method, in the teaching-learning process of the referred courses, which reflects synchronically its relationship with the object of the Integrative Core Discipline (DPI) Software Engineering and Management and diachronically with the EFP. (Morgan, 2015)

The integration of didactic, linguistic and textual elements of an informatics nature presupposes considering the harmonic unity of the parts, where the textual-informatics orients the didactic and the linguistic. The linguistic is oriented, from the didactic, on the basis of the work with the text and the didactic is based on a predominant professional approach for the appropriate selection of the text. All this provides a coherent treatment to the integration of communicative and professional infotechnological skills, in accordance with the interrelation of EFP and DPI content in the solution of professional problems in the sphere of action.

The formative linguo-infotechnological contextualization is revealed as the second subsystem of the conception, whose essence lies in the necessary link that should exist between the integration of communicative and professional infotechnological skills in the teaching-learning process of EFP courses, given in the relationship between education, instruction and the developmental character of the training process in higher education.

This subsystem is manifested from the relationship of coordination and subordination between the components: infotechnological educational systematization, technical-instructive execution and professional developmental performance, which are synthesized in the linguo-infotechnological communication as a quality of superior order.

This subsystem is based on the problem-object-objective relationship of linguo-informatics professional nature, which is an expression of the basic ideas of Cuban higher education: the relationship between education and instruction and the work-study relationship. For this reason, it is stated that the integration object of study, from Didactics, has an educational, instructive and developmental character.

In this sense, the objective of the formative linguo-info-technological contextualization is to facilitate the direction of the integration process object of study, from a formative vision, which responds to the broad profile of the student of Computer Engineering, as a demand of society to the teaching-learning process of the EFP.

Therefore, linguo-infotechnological formative contextualization is defined as the process that governs the integration of communicative skills and infotechnological professionals, from the interdependence relationships between the dimensions: educational, instructive and developmental, inherent to the formative process of the DPI Software Engineering and Management in the teaching-learning of the EFP. (Morgan, 2015)

The education of the Computer Engineering student in the teaching of EFP is supported by the instructional nature of the developmental process of the skills under study in its integration. This approach requires deepening the instructional category, from the relationship between the components of the formative process and the technical elements specific to the profession of Computer Engineering.

The processes related to the development and exploitation of a computer system contain the technical elements that must also be executed, from the integration of the communicative and professional infotechnological skills in the teaching-learning process of EFP courses. Among the techniques to be implemented, the following are singled out: specific application software, interactive teaching platforms, video development, virtual conferences and basic telematic services, among others.

The IT professional performs his activity in a wide range of institutions. This performance includes the processes of the life cycle of the computer system, the operation of systems and technological tools. In addition, this professional performs different functions in the development team, as well as knowledge management and training, for which it is necessary to be fluent in English.

During this process the communicative skills of listening comprehension, oral expression, reading comprehension and written expression in English are intertwined with the infotechnological professional skills: to model conceptually a phenomenon of the objective reality, from the information point of view, to design a phenomenon of the objective reality through the global logical model of the data and to elaborate informatics products, to strengthen the potentialities and to eradicate weaknesses favoring the professional performance and self-development of the student.

This self-development of the student, being associated to his field of action, favors the increase of his effectiveness and efficiency in the solution of problems detected in the operation of the institutions. The solution of problems related to the use of infrastructures for storage, processing and exchange of information facilitates the improvement of skills in English, to satisfy the interests of the country in production and services.

The interaction between skills during the integration process is reciprocal. To the extent that communication skills are strengthened, infotechnological professional skills are strengthened and vice versa. This interaction is at the core of the development that the student achieves in his or her professional modes of action.

Linguo-infotechnological communication reveals its essentiality in the integration of the communicative and professional infotechnological skills of the computer world. This integration is structured on the basis of the student's communicative needs in English in his interrelation with computer systems, which lead him to use this language in the solution of problems related to his professional profile.

The referred communicative needs require the practical-conscious acquisition of linguistic knowledge in English in its lexical, syntactic, semantic, morphological and specialized phonological relations. Consequently, with the language-culture relationship, such needs also require the sociolinguistic, discursive, strategic and sociocultural knowledge proper to linguo-infotechnological communication.

Based on the aforementioned conception, a strategy of a didactic nature was elaborated to contribute to the development of linguo-infotechnological communication of Computer Engineering students in the teaching-learning process of EFP courses, through the integration of the aforementioned skills.

For the elaboration of the proposed strategy, the criteria exposed by different authors such as: Márquez (1999), De Armas (2003), Sierra (2008), Valle Lima (2010) and others have been taken into account. Strategies can be classified as pedagogical, educational, didactic and methodological.

The strategy comprises the projection of a system of didactic actions that allow the integration of communicative skills and infotechnological professionals for the development of linguo-infotechnological communication of the Computer Engineering student in the teaching-learning process of EFP courses based on the CEFR. It is based on the resizing of the content with an interdisciplinary EFP-DPI perspective for the achievement of the proposed objectives in a given time.

The teachers' mastery of the main theoretical aspects of the didactic conception constitutes a condition for the implementation of the didactic strategy, since it makes explicit the main relationships established in the teaching-learning process of the EFP courses, with an interdisciplinary vision where the professional needs of the students are taken into account, in correspondence with the Model of the Professional and the particularities of the DPI Software Engineering and Management. This responds to the demand that society places on the teaching of English in the aforementioned career. Likewise, the necessary training of the professors is guaranteed, in order to carry out an appropriate conduction of the teaching-learning process.

The essential features of this strategy are:

The integrative character, because it favors the integration of the components of the conception in the English teaching-learning process.

The flexible character, because it can be adapted to be applied in the English teaching-learning process in other careers, as well as to adopt other actions according to the needs, contexts and objective conditions.

The interactive character, because it favors dialogue between the subjects involved in the teaching-learning process for the solution of communicative situations.

The formative character, because it allows to increase the student's cultural heritage, his identification with the future profession, to provide the development of habits, skills and values, with an adequate professional development performance.

The motivational character, because the student appreciates the possibility of integrating the contents of English with the skills inherent to the profession, which can be incorporated into their daily actions, research and production, which stimulates interest in the study of this language.

The contextualized character, because the actions are planned in correspondence with the professional communicative needs of the students, in close interdisciplinary linkage with the DPI of the career, which responds to the Model of the professional.

The strategy is made up of four stages containing actions, whose systemic concretion favors the transformation of the current situation in order to achieve the desired objective. These stages are: diagnosis, planning, implementation and evaluation.

Diagnosis

To know and evaluate the level of cognitive and procedural preparation that, in the theoretical and didactic-methodological order, teachers have, to direct the integration of communicative and professional infotechnological skills in the teaching-learning process of EFP courses in the reference career.

The techniques and methods to gather information that made it possible to conform the individual and group characterization of the teachers of the EFP discipline collectives and the DPI, year and career; so that the proposed improvement was contextualized, based on the real needs and potentialities derived from this diagnosis.

Among its actions are:

- To elaborate the diagnostic instruments.
- To apply the instruments developed.
- To identify the weaknesses and strengths for the practical instrumentation of the linguo-info-technological contextualization subsystem.
- To identify the professional problems from the Model of the professional of the reference career and the modes of action required to be formed in the students, for which it is necessary to have as a premise the teaching of the language, as a means of communication, based on the professional needs of the students.

Planning

The didactic components of the strategy are designed to contribute to the dynamics of the integration of communicative and professional infotechnological skills in the teaching-learning process of EFP courses.

The actions corresponding to this stage are aimed at reaching a level of preparation in the teachers that guarantees a solid planning of the integration of the referred skills in the EFP teaching-learning process and, with this, the achievement of the goals proposed in said process. These actions are aimed at the organization of a cohesive methodological work by the subjects involved in the process and favor the realization of the interdisciplinary EFP-DPI relationship, on whose unity and harmony depends the development of the student's linguo-info-technological communication.

At this stage, a theoretical-practical improvement should be planned for the subjects involved in the teaching-learning process, according to their didactic-methodological needs in order to assume this process with a new significance. This improvement can be carried out through workshops, seminars, instructive and demonstrative methodological classes. For this purpose, the spaces of the career collectives, year, disciplines, subjects and other methodological preparation activities deemed necessary will be used.

Among its actions are:

- To determine the system of objectives in function of achieving linguo-infotechnological communication, based on interactive linguo-informatics instruction and linguo-infotechnological contextualization.
- To prepare the necessary teaching materials for the practical implementation of the strategy.
- To specify the knowledge system, based on the professional needs for the didactic treatment of the integration of communicative and professional infotechnological skills, in order to achieve a correct textual-communicative articulation that implies an adequate technical execution.
- To specify the system of skills to be developed, based on the integration of communicative and professional infotechnological skills, such as: modeling; designing and elaborating computer products. All this on the basis of a text related to Computer Science.
- To specify the values to be strengthened, derived from the integrated English-DPI content and from the professional modes of action of the computer engineer, with

an adequate developmental orientation that takes into account the educational and instructional aspects.

To elaborate a system of exercises and activities according to the procedures and techniques, derived from the communicative approach and the principles of the practical-conscious method to achieve the integration of the referred skills.

To select the bibliography to be used and specify the sources of information that will be oriented to the students.

To elaborate the evaluation system that includes: self-evaluation, co-evaluation and hetero-evaluation, which are complemented with the national standardized exams for the certification of the competencies achieved. In addition, extra-class work and research activities that favor the use of English according to their professional needs will be carried out.

Implementation

The objective of this stage is to develop the integration of communicative and professional infotechnological skills in the teaching-learning process of EFP courses, in order to develop the linguo-infotechnological communication of Computer Engineering students, from the implementation of the planned actions.

The implementation stage of the didactic strategy for the integration of communicative and professional infotechnological skills in the EFP teaching-learning process is aimed at developing the processes of linguo-informatics articulation, textual-communicative articulation, contextualized linguo-infotechnological interaction, infotechnological educational systematization, technical-instructive execution and professional developmental articulation.

The actions of the strategy implementation stage have as a fundamental purpose to achieve the development of the integration of communicative and professional infotechnological skills in the teaching-learning process of the EFP courses for the development of the linguo-infotechnological communication of the second year student of the Informatics Engineering career. These actions respond to the dynamics established by the components of the didactic conception that sustains the referred strategy.

From the methodological point of view, the actions of the implementation stage include the teacher and the student, which identifies the bilaterality of this teaching-learning process.

For the implementation of the integration of infotechnological communicative and professional skills, with the objective of developing linguo-infotechnological communication in the teaching-learning process of EFP courses in the reference career, the following didactic actions can be implemented.

Actions to be carried out by the teacher:

- To select texts of a scientific nature conducive to the proper performance of linguo-infotechnological exercises, tasks and professional practices, in order to develop the correct use of structural linguistic elements in English linked to the profession.
- To conceive linguo-info-technological communicative situations in English, to strengthen the promotion of values, from the ideas that they emit and contribute to their professional development.
- To promote reflection, socialization and cooperation in the academic, research and work areas, in order to increase professional development in English.
- To stimulate a cooperative and interactive environment in the teaching-learning process of EFP courses, which favors the development of linguistic-info-technological communication in students.
- To promote the proper handling of information technology, in relation to the mastery of technical language in English, which encourages a relevant professional performance for the interpretation of articles in technical journals, tool and software manuals.
- To promote the use of dictionaries and glossaries to favor the treatment of vocabulary related to their profile in order to favor a better professional communicative performance.
- To train the student to decode and encode the information contained in a linguo-info-technological communicative situation to carry out exercises and activities related to the modeling, design and elaboration of computer products with the use of the English language.

Actions to be developed by the student:

To use study techniques that facilitate self-training of listening and reading comprehension, as well as, oral and written expression, for the interpretation of articles from technical magazines, tool manuals, software and books in English language.

To systematize the use of vocabulary that responds to their professional profile in English, in academic, work and research activities, to enhance communicative competence in English.

To exchange ideas on scientific topics and make oral presentations in different forms of teaching and scientific events with the use of the English language.

To use different learning strategies to develop communicative and professional skills in the development of practices and linguo-info-technological situations in English.

To correctly execute the handling of information technology in relation to the mastery of technical language in English, related to the subject Database.

To produce dialogues in English based on real or modeled situations related to the profession.

To interact in a cooperative way using the English language during professional infotechnological practices, as well as in work practices and research work.

To create glossaries of terms related to ECD subjects in English.

To decode and encode information in English language contained in a linguo-infotechnological communicative situation.

Evaluation

Its main objective is to verify the practical results of its application in the English teaching-learning process. The actions performed by the teacher are verified and evaluated.

The assessment of learning, as a dynamic and complex process, cannot be conceived in the improvement only as a moment in the training, but integrating the different types of assessment (Ronda, 2016): According to its purpose: the assessment may be summative, formative, diagnostic, placement, progress, competence / achievement.

This stage allows teachers and students to assess from self-evaluation, co-evaluation and hetero-evaluation the practical implementation of the strategy. In this way, the teacher and the student carry out regulatory actions, in correspondence with the results of the evaluation and self-evaluation that they execute during the process of integration of communicative and professional infotechnological skills.

These types of evaluation in the English language training process are completed with the national standardized tests for the certification of competencies, which should be characterized by being valid, reliable, practical tests, adapted as much as possible to the needs and characteristics of the context, and at the same time, they should achieve the greatest possible authenticity by reflecting real communicative situations and be conceived from the specifications for the tests elaborated according to the defined objectives.

Conclusions

The study carried out reveals the main didactic references of the integration of infotechnological communicative and professional skills in the teaching-learning process of EFP courses in the Informatics Engineering career to enhance the development of linguo-infotechnological communicative competence.

The didactic orientation actions derived from the elaborated strategy became essential resources, starting from the treatment of students as protagonists and main actors of the process oriented to make them understand the value of the language, motivate them to study it and systematize the practice and use of it in a conscious, intentional and systematic way through the self-management of learning, as a way to promote cognitive independence and autonomous learning.