

English language communicative competence in mining engineering students

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ABSTRACT

Cuban higher education requires competent professionals, prepared to face the advances of science, technology and innovation, and this demands the mastery of the English language. In this sense, it is proposed the elaboration of teaching tasks to propitiate the development of the communicative competence of the English language, at an intermediate level equivalent to B1, in the students of the Mining Engineering career, of the University of Moa, according to the norms of the Common European Framework of Reference for Languages. For the development of the study, several methods were used such as: analysis-synthesis, interviews, surveys, standardized evaluation instruments and pedagogical observation.

Keywords: Communicative competence; English language; Intermediate level; Teaching tasks.

Introduction

Cuban higher education requires competent professionals, prepared to face the challenges imposed by the development of science, technology and innovation, and this requires the mastery of a foreign language and the development of communicative competence, so that they can communicate in other languages, especially in English.

The policy of improvement of the continuing education system for professionals of the Ministry of Higher Education, approved on April 16, 2015, decided to gradually incorporate the mastery of the English language as a graduation requirement for students, from the adoption of the Common European Framework of Reference for Languages, with its corresponding levels, into the curricula of all the courses of the Day Course.

As part of this improvement, in the Mining Engineering career of the University of Moa Dr. Antonio Núñez Jiménez, the concept of standardized evaluation is implemented. This requires students to demonstrate communicative competence in the English language, at an intermediate level equivalent to B1, according to international communicative requirements.

For this purpose, a factual diagnosis was made to the students of the referred career, in the course 2018-2019, through which it was possible to verify that the communicative competence of the English language is still not achieved, at the intermediate level equivalent to a B1, which allowed the authors of this work to specify the following problematic situation:

- Insufficient levels of mastery of the communicative skills of the English language acquired by the students in previous courses.
- Inadequacies in the didactic-methodological treatment of the linguistic contents of the English language for the development of the students' communicative competence.
- Use of language not adjusted to the context of the profession for the achievement of the communicative competence of the English language.

In this sense, we propose the development of a system of teaching tasks to promote the achievement of communicative competence in the English language, at an intermediate level equivalent to B1, in these students, according to the standards of the Common European Framework of Reference for Languages.

Development

The communicative competence of the English language

In order to achieve a better understanding of the term communicative competence of the English language in students of Mining Engineering, it is necessary to explain the concept of competence or competencies in this research. According to Condemarín and Medina (2000), cited in Barbón (2011), competence can be seen as the capacity, integration, set, repertoire, psychological configuration, combination of knowledge, skills, abilities, attitudes, procedures, attributes, values, to intellectual, practical, ethical, attitudinal, affective, volitional, aesthetic and social aspects for efficient performance.

In the second edition of the Common European Framework of Reference for Languages (2002), it is specified that competencies are the sum of knowledge, skills and individual characteristics. Álvarez et al. (2015) referred that the competent professional is the one who knows (diverse knowledge), knows how to do (habits, skills, abilities, skills, capacities), knows how to be and/or knows how to live together (ethical, aesthetic, political attitudes and values) to transform his social reality in relation to collective, social and personal interests.

From the above, it can be inferred that the Mining Engineering career requires competent students in English capable of appropriating a system of knowledge, skills and abilities that allow them to act and solve problems or everyday situations and those of the profession.

The communicative competence in the teaching of foreign languages is one of the most discussed by many specialists and from different referents. Chomsky (1965) defined it as the implicit or explicit knowledge of the language system that allows the development of linguistic skills for the production of a language.

According to Hymes (1971), communicative competence is a set of skills and knowledge that allow the speakers of a linguistic community to understand each other and includes the intuitive command that the native speaker possesses to use and interpret the language appropriately, in a process of interaction and relationship with the social context. In other words, it is the ability to interpret and use meanings and linguistic signs appropriately, in correspondence with the situation in which communication takes place, i.e., listening and speaking.

In the 2nd edition of the Common European Framework of Reference for Languages (2002), it was stated that communicative competence is that which enables a person to act using specifically linguistic means.

According to Medina (2006), this is a configuration of linguistic and extra-linguistic capacities, knowledge, skills and habits that are manifested during the communicative act in the foreign language through the appropriate use of it to satisfy individual and collective communicative needs, in accordance with the required linguistic, sociolinguistic, discursive and strategic norms; and, evidencing both in the content and in the form of the message the high moral values, both universal and those of the Cuban citizen.

This author understood linguistic and extralinguistic aspects properly conjugated with the attitudes and aptitudes of the communicating subject to express his ideas, knowledge, experiences and feelings, in the form of a message, without neglecting the dimensions that are inherent to the communicative competence, and to the axiological part that intervenes in this.

According to Ojalvo (2017), communicative competence is the set of skills that allow the teacher to adequately organize the functions of communication (informative, regulatory and affective) and to perform the communicative style with their students in a way that fosters an appropriate work climate that contributes to the development of the personality of young people. The author takes into account not only the communicative, but also the affective and cognitive aspects of language, aspects that should be considered in the English language teaching-learning process in the Mining Engineering career.

Del Castillo and Rodríguez, (2015), cited in García (2018), stated that communicative competence is made up of others that show that language proficiency is not reduced only to knowing, but to knowing how to do, which is demonstrated from the mastery of skills absolutely necessary to put language into operation: listening, speaking, reading and writing. Therefore, the development of communicative skills is required to achieve the formation of a competent professional in a language, such is the case of English.

Regarding communicative competence, numerous authors have elaborated models that present a division of its components. Among these models is the one proposed by the linguists Canale and Swain (1980), which is composed of four competencies: grammatical (or linguistic), sociolinguistic, strategic and discursive.

- Grammatical competence refers to knowledge of lexical items and syntactic, morphological, semantic and phonological rules.

- Sociolinguistic competence comprises the sociocultural rules that make possible the appropriate production and comprehension of an utterance.
- Strategic refers to the strategies used by the speaker-listener to compensate for any inconvenience that may arise during communication due to lack of competence or performance variables.
- Discursive, takes into account the implementation of those rules of the language that have been acquired by the speaker-listener when uniting form and content so that he/she can produce an adequate oral or written text, making use of the tools that allow him/her to give coherence and cohesion to the text.

Based on the systematization of the previous definitions of communicative competence in the English language, at an intermediate level equivalent to B1, the authors of this research define it as the ability of a person to use linguistic means that allow them to interact orally and in writing in everyday and professional situations, with the use of learning strategies, according to the standards of the Common European Framework of Reference for Languages.

And according to this document, at this level, students should be able to understand the main points of clear texts in standard language if they deal with familiar matters, whether in work, study or leisure situations. Can deal with most situations likely to arise while traveling in areas where the language is used. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences, events, wishes and aspirations and briefly give reasons and explanations for opinions and plans.

Teaching tasks to promote the achievement of communicative competence in the English language at an intermediate level equivalent to B1.

For the elaboration of the system of teaching tasks, the definition of teaching tasks provided by Álvarez (1999), quoted in García (2020), was taken into account, who considered them as the cell of the teaching and educational process, since they reveal a knowledge to assimilate, a skill to develop, and a value to form, reasons that determine, from their fulfillment, that the student is instructed, developed and educated.

In this purpose, the basis of the task is the contradiction between what one has and what the subject wishes to achieve; In other words, it is precisely the contradiction of the problem posed in the task, which develops thinking on the way to its solution, and

therefore, the authors of this work confer an important role to the tasks for the appropriation, by the students, of a system of knowledge necessary for the mastery of the English language, and consequently, to promote the development of communicative competence in that language, at an intermediate level equivalent to a B1, according to the norms of the Common European Framework of Reference for Languages.

In the same way, it is necessary to produce changes in the didactic conception for the elaboration of teaching tasks, since these should allow the English language teacher to pay attention to the individual differences of his/her students, from an accurate diagnosis, and according to the levels of English proficiency, a factor that contributes positively to their integral formation as competent professionals in this language.

In the process of elaborating the teaching tasks, the classification was taken into account, according to the levels of assimilation established by Rizo (1979), cited in García (2020), namely:

1. **Reproductive tasks:** are those that require the student to repeat the content that has been informed, either in declarative form or in the resolution of problems that are the same or very similar to those already solved.
2. **Productive tasks:** require the student to be able to apply the content in new situations. In this way, when the student solves problems whose situation is unknown to him/her and that require him/her to conceive the way to solve them.
3. **Creative tasks:** the student works in new conditions and situations. He has to make qualitatively novel contributions, so he uses the logic of research.

Although the self-management of English learning conceives students as the main protagonists and actors in the process of learning English, and is oriented towards understanding its value, motivating them to study it and systematize the practice and its use in a conscious, intentional and systematic way, as a way to promote cognitive independence and autonomous learning, in this classification the role of tasks is evident as an alternative for the achievement of communicative competence, at the intermediate level equivalent to a B1.

On the other hand, this system should not obviate the evaluation (co-evaluation, hetero-evaluation and self-evaluation), considered as a frequent action, integrated to the process of teaching and learning of the English language, oriented to verify the real state of learning of the students in the realization of the tasks, and the domain reached in this process, in order to improve it, if necessary.

The student, once he advances in the development of the tasks, must be able to self-evaluate his work, so the evaluation does not focus on the final result, but rather he evaluates his learning process from the moment he is able to work without the help of the teacher or another classmate, so they must be interesting and motivating.

Teaching tasks were developed that respond to the four language skills: listening and reading comprehension, written and oral expression. In addition, a video that appears in https://m.youtube.com/watch?v=B6TXT_OHxRW and a text related to mining in Cuba were selected to be interesting for students.

The following is a description of some of the tasks designed to achieve communicative competence in English, at a level equivalent to B1.

Teaching Task 1

Objective: To develop listening comprehension skills based on the projection of a video.

Procedure: The teacher projects a video to the students about mineral extraction in Pinar del Río, and then guides the students to answer a set of questions

1. **Vas a ver un vídeo corto. Escoge las letras A-C adecuadas que completen cada afirmación sobre el vídeo.**
2. The video is about:
 - A__ Open pit mining.
 - B__ A solution to mitigate dust.
 - C__ Track vehicles and drilling equipment.
3. One of the main obstacles in mining operations is:
 - A__ Dust control.
 - B__ Excavators.
 - C__ Drilling equipment.
4. Durasolution is:
 - A__ A mining equipment.
 - B__ A track vehicle.
 - C__ A dust abatement technology.
5. Durasolution can be used...
 - A__ When it is raining.

- B__ No matter the weather.
- C__ Under freezing conditions.

6. What is durasolution's bonus benefit?

- A__ Dust reduction.
- B__ Successful operations.
- C__ Efficiency of vehicles and roads stability.

Teaching Task 2

Objective: To show comprehension of the text.

Procedure: The teacher indicates the reading of a text about Heidi's vacation, and then instructs the students to select the correct letter.

Read carefully the entire text about Heidi's holiday. Then answer the questions.

I went on holiday to the Polimetallic Mining Project Castellanos, in Pinar del Río, last year. I didn't stay in my aunt's house because I stayed with some friends. We went sightseeing in the mornings and we took a lot of photos. Our favourite place was the front part of work where mineral extraction with retroexcavator and Volvo trucks are done. There, the burst of mineral, such as zinc and lead, is done with drilling and explosive. It was amazing to see the load and explosion process on the work bank. It's a great place to relax and enjoy. We were only there for a week, so we didn't visit any other places. Next time, maybe!

Choose the appropriate letters A-C and write them in boxes 1-4 according to the text above.

1. According to the information in the text, on holiday Heidi went to
 - A__ Her aunt's house.
 - B__ The easternmost province of the country.
 - C__ Castellanos Mine.
2. According to the information in the text, Heidy was provided accommodation by
 - A__ Her friends
 - B__ Her aunt.
 - C__ Her parents.
3. According to the information in the text, in the mornings, Heidi's friends
 - A__ Extracted minerals.

B__ Watched the explosion process.

C__ Visited new places.

4. According to the information in the text, how many days did they spend in Pinar del Río?

A__ 5 days.

B__ 7 days.

C__ 15 days.

Teaching Task 3

Objective: To show comprehension of the text.

Procedure: The teacher indicates again the reading of the text about Heidi's vacation. Then, the students are going to show the sentences that indicate that the answer is true (T), false (F) or does not appear in the text (NG).

Read the text again about Heidi's holiday and write:

T (If the statement is true)

F (If the statement is false)

NG (If the statement is not given in the text)

- 1) __ Heidi went to Pinar del Río 2 years ago.
- 2) __ She went to Pinar del Río by plane.
- 3) __ Heidi and her friends had a camera with them.
- 4) __ Heidi and her friends didn't stay in Pinar del Río for very long.
- 5) __ Heidi didn't have a good time in Pinar del Río.

Teaching Task 4

Objective: To write a text based on questions given by the teacher.

Procedure: The teacher instructs the students to write a text based on the given situation.

You participated in a research project about mineral mining in Pinar del Río and you picked up some valuable information. You can follow up these points to write about:

- When did you go there?
- Who did you go with?
- Where did you stay?
- How did you travel around?

- What did you do?
- What did you see?
- Did you have a good time?

Teaching Task 5

Objective: To write a letter based on questions.

Procedure: The teacher gives the students part of a letter he received from a friend who is studying Mining Engineering in the province of Pinar del Río. Then, they are going to answer the letter, answering their friend's questions, in about 100 words.

There is part of a letter you received from a friend. Then you are going to write a letter, answering your friend's questions in about 100 words.

...I went on holiday to Castellanos Mining last year – I stayed with some friends – I went sightseeing in the morning – I saw mineral extraction....
Tell me, did you visit any interesting places? Where did you stay? What did you

Teaching Task 6

Objective: To interact orally through questions and answers about mineral extraction.

Procedure: The teacher instructs the students to work in pairs. Student A is going to provide his partner with all the information gathered about mineral extraction in the Castellanos Mine, Pinar del Río. Student B will ask questions based on the elements given by the teacher.

Pair work. Tell your partner all the information you picked up about mineral extraction in Castellanos Mine. You can use the following prompts:

Places, people, means of transportation, time, any recommendations, plans to go there again.

Teaching Task 7

Objective: To present orally, showing a certain level of independence.

Procedure: Student B is going to present orally all the information provided by student A about the extraction of minerals in the Castellanos Mine, Pinar del Río. Tell the class all you know about mineral extraction in Castellanos Mine, Pinar del Río.

Conclusions

On the basis of the study conducted, it can be stated that when the development of communicative competence in the English language is achieved, at an intermediate level equivalent to B1, based on a coherent system of teaching tasks oriented to that end, and with strict compliance with the requirements of the Common Framework, students are able to share experiences, exchange ideas or opinions, act appropriately in each context or communicative situation, on familiar and professional situations, according to their immediate needs, motivations and interests.