## Original Paper

## Error Analysis in the Written Compositions of Spanish

# Engineering Students: A Comparative Taxonomy

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Received: February 7, 2022	Accepted: February 18, 2022	Online Published: February 24, 2022
doi:10.22158/sssr.v3n1p37	URL: http://dx.doi.org/10.	22158/sssr.v3n1p37

## Abstract

Needless to say, writing is a language skill that for most FL students is quite difficult to master. Especially for undergraduate technical students, this seems to be a challenging task since the presence of difficulties in any FL writing forces them to commit various errors in their written productions. Henceforth, errors seem to be inevitable when writing in a foreign language. And in order to regulate this appearance of errors, many researchers have started to study the errors made by these students, putting then into different categories.

Therefore, what this research paper tries to identify and track is those errors made by engineering students in a public Spanish Polytechnic University over the last two academic years. We shall attempt to categorise errors based on their source following the comparative taxonomy proposed by Dulay, Burt and Krashen in "Language Two" (1982), one of the different taxonomies as established by them.

And in order to conduct this research, a total of 70 essays undertaken by a number of engineering students were selected taking into account their written productions along the task assigned in these two last academic years. These numerous writings have thus been analysed and the errors detected have been tracked down and categorised basing ourselves on the comparative analysis of errors.

The main objective of this study is to prove that the results obtained from this analysis have undoubtedly demonstrated that the majority of errors committed by these engineering students can be classified as belonging to the interlingual category, being the category with the highest number of occurrences, contrary to the opinion of some other researchers. In terms of the number of incidences, we shall validate that the errors detected in those 70 essays can be graded in the following order according to this comparative taxonomy of errors: interlingual errors, other errors, ambiguous errors, and developmental errors.

## Keywords

comparative taxonomy, engineering students, error analysis, types of errors

#### **1. Introduction**

Nowadays, there is a clear tendency to consider the errors made by students in their process of language learning not as a negative aspect of language learning but, rather on the contrary, as a natural step in the development of their language skills. As Corder stated "the errors that learners make are a major element in the feedback system of the process that we call language teaching and learning" (Corder, 1981: 35).

In the past, teachers considered errors committed by students as something undesirable, something to prevent from occurring at all means. But in the last decades, given the many scientific studies published, researchers came to consider errors as evidence for a creative process in language learning.

Error analysis provides us with scientific evidence for the system of language that students are using at any time in the course of development of their studies. Basically, this analysis consists of four main steps: to identify the errors, to explain the errors, to categorise the errors, and to evaluate the errors.

Consequently, the errors which emerge from the students' learning process can clearly tell us what needs to be taught or fostered and how the learning is ongoing at any time in order to take the necessary adjustments. Quoting Saville-Troike "learner errors are windows into the language learner's mind" (Saville-Troike, 2006: 39).

Also, Dulay, Burt, and Krashen (1982) believe that an analysis of errors made by language learners can help us understand the process of language learning deeply. Besides, it also helps teachers to decide on those teaching materials that best fit the learning needs of the language learners.

And at universities, students are taught to master, at least up to a certain level, English in its four different skills: listening, speaking, reading, and writing. Among these four skills, writing is undoubtedly the most important productive to be learned. But not only is the most productive of the four skills, but it is also the one that they usually face with certain suspicion and even fear due to their proven inability to express correctly in written English, regardless the nature of the task assigned. As a result, this turns out to be problematic when it comes to giving them feedback.

We should especially bear in mind the fact that we are not working with students doing the English studies degree at university, whose English level could be expected to be higher than average, but a technical one on engineering studies. Consequently, all this background information has its natural reflection on the numerous errors committed by them in their written productions which had to be undertaken along the semester.

In consonance, the research methodology conveyed in this study shall consist of following the comparative analysis of errors, as proposed by Dulay, Burt, and Krashen (1982), in order to categorise the errors made in the written productions of engineering students over the last two academic courses. This analysis will provide us with a clear perspective on which category of errors is the most frequent amongst them out of these four: ambiguous errors, developmental errors, interlingual errors, and other errors.

#### 2. Literature Review: State of the Art

According to Saville-Troike, error analysis is the very first approach to the study of Second Language Acquisition (SLA). This analysis includes an internal focus on "the learner's creative ability to construct the language" (Saville-Troike, 2006: 38).

Error Analysis provides evidence not only for the system of language which a learner is using at any particular point in the course of his or her L2 development, but also for the different learner's strategies on discovering of the language. Therefore, the errors which emerge from that learning process could tell the teacher what really needs to be taught and the researcher how the learning is actually proceeding.

Learner errors could provide us with an understanding of the underlying processes of Second Language Acquisition. And these processes, following Richards (1971), can be inferred from an examination of the learner language protocol, case studies, diary studies, classroom observation or experimental studies.

According to Corder, the procedure for conducting error analysis basically consists of 3 major stages: "recognition, description, and explanation of errors" (Corder, 1981: 126). But White, a few years later, subsequently elaborated these three stages into more following steps: collection of data from the students' compositions, identification of errors (labelling the errors with varying degrees of precision), classification into errors types, statement of relative frequency of error types, identification of the areas of difficulty in the target language, and remedial lesson therapy (1987).

Therefore, quoting Richard "errors are usually classified according to language components (phonological, morphological or syntactic)" (Richard, 1974: 45). But later on, both Dulay, Burt, and Krashen in 1982 and James in 1998 presented the most useful and commonly used bases for a descriptive classification of errors by describing them using different kinds of taxonomy: linguistic category, surface category, comparative taxonomy (the one selected for this research), and communicative effect.

The first taxonomy, linguistic category, carries out errors in terms of where the error is located in the overall system of the target language based on the linguistic item which is affected by the error (James, 1998). It clearly indicates in which component of language the error is actually located: phonology (pronunciation), syntax, and morphology (clause, noun phrase, verb phrase, auxiliaries, preposition, adjectives...). This framework is useful and applicable to handle the errors of relatively advanced learners, which is not our object of study.

The second taxonomy, surface strategy category, was also proposed by James (1998). This classification is based on the ways in which the learner's erroneous version is different from the presumed target version. It highlights the ways in which the surface structures deviate. For example, learners may omit necessary items (omission), or add unnecessary ones (addition), or they may just misform items (misformation) or misorder them (misordering). This classification can give us a clear description about the cognitive processes that underlie the learner's reconstruction of the new language

which is being learned. It also explains the fact that learner's errors result from their active way in using the interim principles to produce the target language.

The third taxonomy, comparative taxonomy, which is the one we are basing ourselves on in order to conduct this research, was fully developed by Dulay, Burt, and Krashen in 1982. This is a comparison between the structures of second language errors and certain other types of constructions. So, for practical reasons, this is the taxonomy we will be applying along this study. And these comparisons have resulted into four main error categories within this taxonomy: ambiguous, developmental, interlingual, and other.

Different researchers have consistently found that the great majority of errors in the language output of L2 learners, in this case undergraduate engineering students, is of the developmental type. Although adult learners, as in our case, tend to exhibit more mother-tongue influence in their errors than children normally do, adult interlingual errors also occur in relatively small numbers according to such researchers. However, as we will also be demonstrating in this research, in our study the great majority of the errors detected in the 70 essays examined correspond to the interlingual type, being incidentally developmental errors the least frequent.

*Developmental errors* are errors which are similar to those made by children learning the target language as their first language. For example, if we take the following utterance made by a Spanish child learning English "cat eat it", the omission of both the definite article and the past tense marker may be classified as developmental because they are also found in the speech of children learning English as their first language. According to Dulay, Burt, and Krashen, developmental errors can also be classified into the following types: omissions (Mark no milk), additions (Mark doesn't likes it onions), misformations (He gots a flowers), and misordering (What this is?).

*Interlingual errors* are similar in structure to a semantically equivalent phrase or sentence in the learner's native language. For example, the utterance "the woman slender" produced by a Spanish speaker reflects the word order of Spanish adjectival phrases [article + noun + adjective]. To identify an interlingual error, researchers normally translate the grammatical form of the learner's phrase or sentence into the learner's first language so as to see if there exist similarities. According to Ellis (1985), this type of error is interference or transfer, which means that the learner's native language interferes with the learning of the L2, or rather it transfers into the learner's developing L2 system.

*Ambiguous errors* could be equally classified as developmental or interlingual errors. This type of error reflects both the learner's L1 and also the type of error in the speech of children acquiring English as their first language. For example, in the utterance "I no have a motorbike", the negative construction reflects the learner's native Spanish and it is also characteristic of the speech of children learning English as their first language.

*Other errors* make up a sort of grab bag for items that do not fit into any other previous category. For example, if we take the utterance "He do thirsty", the speaker used neither the native Spanish structure (in the use of have for is as in He have hungry), nor an L2 developmental form (such as She hungry),

where the auxiliary is omitted altogether.

Such an error would go into the other category, also called "unique errors" by Dulay and Burt (1974), referring to their being unique to L2 learners. These errors are not similar to those children make during the first language development, so they must be unique to second language learners, and since they are not interlingual, at least some of them must be unique reflections of a creative construction.

The fourth and last taxonomy is the communicative effect taxonomy, based on the perspective of their effect on the listener and the reader (Dulay, Burt, and Krashen, 1982). It deals with distinguishing between errors that seem to cause miscommunication and those that do not. Errors that affect the overall organization of the sentence usually hinder communication, while those errors that affect a single element of a sentence usually do not hinder communication. And according to Dulay, Burt, and Krashen (1982), this type of taxonomy classifies errors into global errors and local errors.

*Global errors* are errors that affect the overall sentence organization and they significantly hinder communication. These errors include wrong order of major constituents as in "English language use many people"; missing, wrong or misplaced sentence connectors as in "He will be rich until he marry"; missing cues to signal obligatory exceptions to pervasive syntactic rules as in "The student's proposal looked into the principal"; and regularization of pervasive syntactic rules to exceptions as in "We amused that movie very much".

On the other hand, *local errors* are those that affect single elements in a sentence and that do not usually hinder communication significantly, at least not to a great extent. This type of errors includes errors in noun and verb inflections, articles, auxiliaries, and the formation of quantifiers, among some others.

And we cannot skip the latest study carried out by McDowell and Liardet (2020) who employed an error analysis framework, elaborated with the functional descriptions of Systemic Functional Linguistics (SFL), to investigate error patterns in research article manuscripts written by Japanese materials scientists.

Results highlighted the difficulties that the nominal group constituted for participants, with almost half (47.81%) of the identified errors occurring within complex nominal groups. Further, the analysis revealed that the most dominant error pattern involved errors with articles and plural -s. Findings from the study also informed the design of a pedagogical tool to assist Japanese materials scientists and language specialists alike in identifying and rectifying these errors.

Finally, it is also worthwhile mentioning here several studies carried out by some Spanish university professors such as Roca de Larios, Murphy, and Manchon Ruiz among others. In the last decades, this group of professors have published a number of articles dealing not only with the analysis of errors but also with other aspects regarding their interpretation, strategies and components.

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#### 3. Method

This study was carried out using a quantitative research design which was employed to reveal what and how many errors the students made, finding out the most frequent ones following the comparative taxonomy of errors as proposed by Dulay, Burt, and Krashen in 1982, as it was anticipated in the previous section.

The participants involved were a number of undergraduate engineering students, mostly male given the technical nature of the degree, doing their degree on a Spanish Polytechnic University who were asked to undertake a written task about the functioning of car engines as well as a description of the different types of cars.

The data attained for this research laid the focus on the numerous errors committed by the students in their written compositions. Henceforth, the information obtained was analysed by searching and classifying the errors found into the corresponding categories as established by Dulay, Burt, and Krashen: ambiguous errors, developmental errors, interlingual errors, and other errors.

Therefore, the instruments used to carry out this research corresponded to the different writing productions from the students. At this point, it is also important to remark that, prior to the elaboration of the written task, the participants had received a proper amount of information on the topic. For that reason, they had the necessary input of knowledge in order to be able to write about the topic proposed from a theoretical point of view.

As for the procedure followed in this study, it took place during one semester of two consecutive academic courses. Data collection was carried out after the participants had been asked to write the task at home so it was later handed in. Although errors were categorised according to different taxonomies, the comparative taxonomy was only considered for the present research according to the objectives of the study.

#### 4. Discussion of Results

From the analysis of the data obtained, we can anticipate, in general terms, that there was a total of 275 errors found in the 70 essays corresponding to the task accomplished. And following the comparative taxonomy of errors proposed by Dulay, Burt, and Krashen in 1982, the errors found in this task were classified into the following types: ambiguous errors, developmental errors, interlingual errors, and other errors. For the sake of clarity, we just arranged them in alphabetical order, regardless their frequency as we will be discussing from now on.

The task that students had to compel with was the description of a car engine, trying to provide as many details as possible about the 4-stroke cycle. This task was meant to be handed in after having studied a thorough topic on mechanics using descriptions, superlatives, comparison, and motion and position prepositions in as much as possible.

For this task, a total of 70 essays were encountered. Although the task was part of the continuous evaluation of the subject, a number of students opted for not presenting it and taking their marks just

from the final exam at the end of the semester.

Analysing a bit further these 70 essays, no errors were found in 9 of them, which represented a 12.8% of the total, being again the least numerous group. This time we found that the most represented group corresponded to the case of essays with just 1 or 2 errors, with a total of 23 essays which made up a 32.8% overall. In between, we came across essays with more than 5 errors, 21 altogether out of 70 denoting a 30.2% in total, and those essays with 3 or 4 errors, with 17 essays encountered for a total of 24.2%.

And, contrary to the opinion of some other researchers, the category with the highest number of errors in the task was that of interlingual errors with a total of 121 errors out of 275, which represented a 44%, and developmental errors the category with the least number of errors with 38 errors detected, standing for a 13.8% in total.

The second position in the rank belonged to other errors with 76 errors identified, which represented a 27.6% overall. And the third position corresponded to ambiguous errors with a total of 40 errors and a 14.5% as a whole. This proved our disagreement with the principles established by some researchers in previous studies as we anticipated in the literature review section.

Let us now focus on the errors labelled as *interlingual*, the category with the highest number in the task. Following the classification by Dulay, Burt, and Krashen, the interlingual errors detected in this essay fell into the following 6 types: addition of preposition, inappropriate noun phrase, verb-number disagreement, inappropriate demonstrative, inappropriate preposition, and inappropriate pronoun.

Type of error	Number of errors	Percentage	
Addition of preposition	3	2.4%	
Inappropriate noun phrase	2	1.6%	
Verb-number disagreement	89	73.6%	
Inappropriate demonstrative	12	10%	
Inappropriate preposition	12	10%	
Inappropriate pronoun	3	2.4%	
TOTAL	121	44%	

Table 1. Number and Percentage of Interlingual Errors in the Task

Source: Own elaboration

As can be seen in the previous table, the type of interlingual errors which really stood out was the case of verb-number disagreement, with 89 errors detected out of 121, which meant a 73.6% of the total. Taking into account that the focus is usually laid on the technical content rather than on how it is actually said, it may thus seem reasonable to justify such presence of this type of interlingual errors. A given sample of this error can be seen in the following sentence: "The piston move downwards,

allowing a premixed air-fuel mixture into the cylinder". Concentrating on what is said rather than on the how makes them forget to pay attention to the concordance between the subject and the verb.

The second type of interlingual errors in numbers occurred when either an inappropriate demonstrative or an inappropriate preposition was used. In both cases, this happened 12 times standing for a 10% in total. The following example clearly illustrates the first type of error, the use of an inappropriate demonstrative: "It has a dangerous way to storage <u>this</u> fuels that may cause an explosion". Maintaining the concordance, this time between the determiner and the noun, seemed again to pose some problems onto the students. And the next sentence could be included as a sample of the second type, the use of an inappropriate preposition: "The cycle consists <u>in</u> combining an air-fuel mixture leading to the car movement". This gives the impression that students did not pay too much attention to the use of the correct preposition.

Much less numerous were the other 3 types of interlingual errors identified in this task. The addition of a preposition and the use of an inappropriate pronoun took place 3 times each, which stood for a 2.4% as a whole. An example of the former type of interlingual error, the addition of a preposition when this was not needed, could be the following: "The spark ignites the fuel-air mixture causing <u>on</u> the explosion". The overuse of prepositions might be justified from the lack of expertise on the matter. And in the case of the latter type, the use of an inappropriate pronoun, something not expected to happen, we may include this one: "The name of each stroke describes <u>it</u> function". This type of error cannot be justified by any means other than a careless writing on the part of the student.

Finally, the type of interlingual errors with the least occurrences along the task was the use of an inappropriate noun phrase. This happened just twice, denoting a 1.6% of the total. An example of this type could be the next one: "The difference most important are the following". The incorrect placement of words in the phrase was a rather testimonial type of error.

After this first category of interlingual errors, the second category with the highest number of occurrences referred to *other errors* with a total of 76 out of 275, representing a 27.6% overall. Under this category, the following 4 types of errors were identified: addition of article, addition of plural marker, omission of progressive form, and incorrect spelling.

Type of error	Number of errors	Percentage
Addition of article	1	1.3%
Addition of plural marker	7	9.2%
Omission of progressive form	1	1.3%
Incorrect spelling	67	88.2%
TOTAL	76	27.6%

Table 2. Number and Percentage of Other Errors in the Task

Source: Own elaboration

As can be deduced from the information of the table, the highest bulk of other errors fell into the type of incorrect spelling with a total of 67 errors, which meant an 88.2% overall. Given the technical nature of the task, describing a car engine, it may seem reasonable to expect such a figure of words incorrectly written. A representative example of this type of error could be the following: "The piston moves back up which makes it much more <u>flamable</u>". Taking into account the number of technical words they were supposed to use, the presence of such number of errors may be defined as logical. And had not been for this type of errors, this category would have been present almost residually along the task.

The second type of other errors spotted in this task was the addition of a plural marker when it was not expected, as in "All engines are <u>goods</u> for all cars". This type happened a total of 7 times along the task, representing a 9.2% of the total. It seemed that students tended to overgeneralise the plural formation of words which do not take the plural form in English as they do in Spanish (adjectives mainly).

Finally, the remaining two types of other errors, addition of article and omission of progressive form, materialised just once in each case, standing for a testimonial 1.3% of the total. An example of the former case, the addition of an article, was found in the next sentence: "You need to be charging <u>the</u> more than one hour". In addition, as an example of the latter case, the omission of the progressive form of a verb, we could include the following: "Electric cars have of lot of advantages like not <u>make</u> noise". Certainly, these two types of errors did not suppose any problem when dealing with the task assigned.

Focusing now on the third category of errors, *ambiguous errors*, in terms of frequency, a total of 40 errors were found out along the task, standing for a 14.5% overall. This category was overshadowed by the other two categories in relevance. Only 4 different types of ambiguous errors were identified: inappropriate auxiliary, omission of article, omission of subject, and inappropriate article as shown in table 3.

Type of error	Number of errors	Percentage
Inappropriate auxiliary	2	5%
Omission of article	15	37.5%
Omission of subject	17	42.5%
Inappropriate article	6	15%
TOTAL	40	14.5%

 Table 3. Number and Percentage of Ambiguous Errors in the Task

Source: Own elaboration

As can be inferred from the previous table, the most frequent type of ambiguous errors was the omission of the subject with 17 cases detected, representing a 42.5% of the total. It seemed that students forgot to include the subject in the sentences, especially when this referred to an impersonal one reflecting the influence of their mother tongue (Spanish). This was reflected in the next example:

"As we can see, it is used in industry because is safer than the petrol engine".

Close in numbers was the second type of ambiguous errors, the omission of the article, whether it was the definite or indefinite one, something which happened 15 times, standing for a 37.5% overall. The following is an example of this type of error: "An electric car pollutes less than \_\_\_\_\_ fuel one". Quite surprisingly, within this type of error, students forgot to include the article in the corresponding place, making overgeneralizations when these were not required.

The third type of ambiguous errors in terms of frequency was the use of an inappropriate article with a total of 6 errors detected, which meant a 15% as a whole. As an example of this type of error we could include the following: "The four-stroke cycle is <u>a</u> internal combustion engine that consists of four steps". The use or misuse of the correct article seemed to settle certain struggles onto the students, something which could not be foreseen.

And the least frequent type of ambiguous errors was the use of an inappropriate auxiliary in the sentences, something which just occurred twice, representing a scarce 5% in general. The following is a clear example of this type of error: "The electric cars <u>does</u> not produce any combustion or explosion". This, the use of the correct auxiliary, did not represent a big deal for them, so this may well be due to a careless use on their part.

Finally, the last category of errors and the least representative one was that of *developmental errors*, with a total of 38 errors, which represented a 13.8% of the total. This was the least represented category of errors along the task, which supports our avowed theory that this was the least illustrative category of errors for undergraduate technical students, contrary to the studies previously published.

Under the umbrella of developmental errors, 7 different types were distinguished: omission of auxiliary, omission of plural marker, omission of regular past tense marker, omission of third person singular, inappropriate part of speech, incorrect auxiliary, and omission of infinitive marker "to".

Type of error	Number of errors	Percentage
Omission of auxiliary	3	7.9%
Omission of plural marker	9	23.7%
Omission of regular past tense marker	1	2.6%
Omission of third person singular	3	7.9%
Inappropriate part of speech	13	34.2%
Incorrect auxiliary	1	2.6%
Omission of infinitive marker "to"	8	21%
TOTAL	38	13.8%

Table 4. Number and Percentage of Developmental Errors in the Task

Source: Own elaboration

Within this type of developmental errors, the most frequent one was the use of an inappropriate part of speech with 13 cases detected, which represented a 34.2% of the total. To use the adequate part of speech in order to construct correct sentences seemed to be the most recurrent problem for them when facing the task, again caring more for the content than the form. A clear example of such an error could be the following: "As electric cars don't need oil changes so the maintenance of these cars is easier".

The next type of developmental errors in numbers occurred with the omission of the plural marker, something which happened 9 times, representing a 23.7% overall. An example of this type can be the next one: "In conclusion, electric <u>car</u> are incredibly simple with only one moving part". Apparently, students skipped the use of the correct plural marker, something we could not predict in advance.

Very close in numbers was the next type of developmental errors, the omission of the infinitive marker "to" with a total of 8 errors spotted along the task, denoting a 21% as a whole. An illustrative sample can be shown in the next sentence: "In this essay, I'm going \_\_\_\_\_ explain the four-stroke engine". This type of error cannot be justified from a scientific basis but rather from a careless writing style.

In continuation, we faced two types of developmental errors with 3 errors each, the omission of an auxiliary and the omission of the third person singular. This accounted for an almost 8% of the total in either case. As an example of the former, the omission of an auxiliary form, we can cite the following: "There \_\_\_\_\_ not enough infrastructures". Again, this may well be attributed to a neglected use. Meanwhile, the next one can be included as an example of the latter, the omission of the third person singular: "It <u>don't</u> pollute, it is easy to build and it is cheap". The correct formation of the third person singular, either affirmative or negative as in this case, supposed a minor problem when facing this task. Finally, the least recurrent types of developmental errors were again two other types, the omission of a regular past tense marker and the use of an incorrect auxiliary, with just one error each, representing an occasional 2.6% of the total, being their presence almost residual. The omission of a regular past tense

marker can be seen in the following example: "The exhaust valve is closed and the intake is <u>open</u>". In long complex sentences, students forgot to keep the past formation in all the verbs in the sentence. And as an example of the use of an incorrect auxiliary we can mention this one: "It <u>is</u> not need gear switching and clutching". However, these two types of errors did not cause serious problems on the students' side.

#### 5. Conclusions

Language learning, like almost any other kind of human learning, involves committing errors, at least up to a certain point. And recent research in applied linguistics emphasised the significance of students' errors in second language learning. Since then, Error Analysis has become one of the major topics of concern in the field of second language acquisition research and quite a few studies have been released ever since.

Along the present article, the main categories of errors have been described and analysed following the classification proposed by Dulay, Burt, and Krashen in 1982 into 4 different taxonomies. This initial

approach was continued tracing the sources and types of errors taking into account the comparative analysis taxonomy, one of the 4 different taxonomies proposed by these authors, who divided errors into 4 main categories: ambiguous, developmental, interlingual, and other errors.

Although these researchers, and some others, put forward that the majority of errors committed by adult learns correspond to the developmental category, we have consistently demonstrated along the article that in our specific case, for undergraduate engineering students the most frequent category was interlingual in both tasks examined.

Let us recall back at this point that the main corpus of this research was the analysis of the 70 essays undertaken by undergraduate engineering students throughout the task assigned over the last two academic courses.

In terms of the global number of errors spotted, a total of 275 errors were detected along the task, which gave us a rough average of 3.9 errors per essay. And having a close look at the number of errors found in the 70 essays, we made a distinction among those essays having no errors, those containing 1-2 errors, those comprising 3-4 errors, and those with more than 5 errors.

Therefore, we found that the majority of essays contained 1 or 2 errors with a total of 23 essays out of 70, standing for a 32.8% in general. The second representative group was that of essays having 5 or more errors, 21 essays out of 70, representing a 30% overall. The next type was formed by those essays with 3 or 4 errors, 17 out of 70, denoting a 24.3% in total. Finally, the least representative group was the one formed by essays with no errors with just 9 essays encountered, meaning a scarce 12.9% of the total. These data can be easily understood in the following illustrative figure.

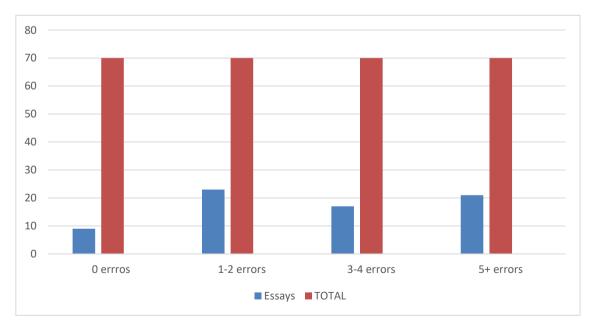


Figure 1. Number of Errors in the Task

Source: Own elaboration

More importantly, focusing on the different types of errors in the 70 essays, we proved along the research how the most frequent category of errors was not that of developmental errors but of *interlingual* ones. Contrary to the opinion of some linguists, we have demonstrated that interlingual errors was the category with the highest presence in the task with a total of 121 errors out of 275, which meant a 44% overall as can be seen in the next figure.

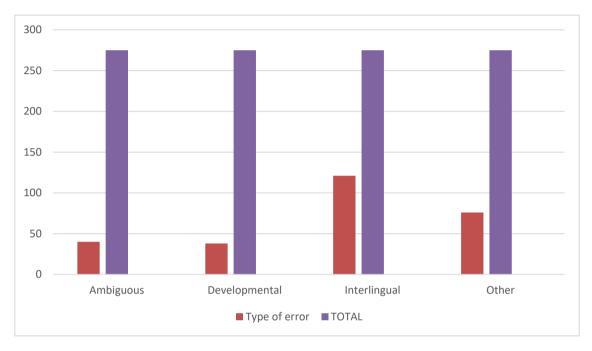


Figure 2. Type of Errors in the Task

Source: Own elaboration

This might well be explained and justified given the nature of not only the writing examined but also the typology of students looked upon. Perhaps it actually makes a difference whether the students learning English come from a technical degree, undergraduate engineering students in our case, and English is not the goal of their studies but the means, or not in the number and types of errors committed.

Under this category, six different types were distinguished: addition of preposition, inappropriate noun phrase, verb-number disagreement, inappropriate demonstrative, inappropriate preposition, and inappropriate pronoun. The most recurrent type was the case of verb-number disagreement with 89 errors whilst the least recurrent one was that of the use of an inappropriate noun phrase with just 2 errors. Other repeated interlingual errors were the use of an inappropriate demonstrative and the use of an inappropriate preposition with 12 errors in either case as shown in the following chart.

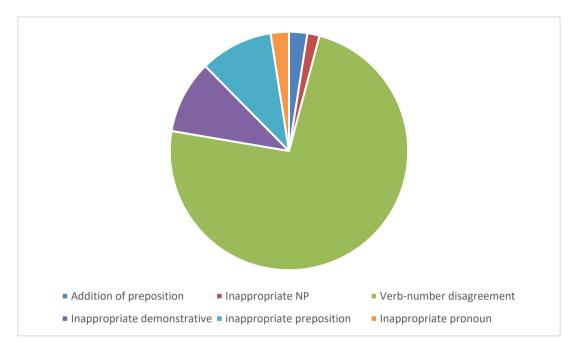


Chart 1: Distribution of types of interlingual errors. Source: Own elaboration

The second group in terms of numbers was that of *other errors* with a total of 76 out of 275, representing thus a 27.7% overall. However, at this point, it should be clarified that most part of these other errors corresponded to the type of incorrect spelling as we previously mentioned through the article. Taking into account the technical nature of the tasks, it seemed inevitable to expect such an elevated figure of words incorrectly written. Otherwise, had it not been for this type, other errors would have stood up for the last position in the rank.

Other errors were divided into the following 4 types: addition of article, addition of plural marker, omission of progressive form, and incorrect spelling. And as anticipated, the most numerous type of other errors was that of incorrect spelling with 67 errors due to the scientific nature of the tasks. And the least frequent types of other errors were the addition of the article and the omission of the progressive form of the verb with just one error in either case. This can be clearly proven in the next chart.

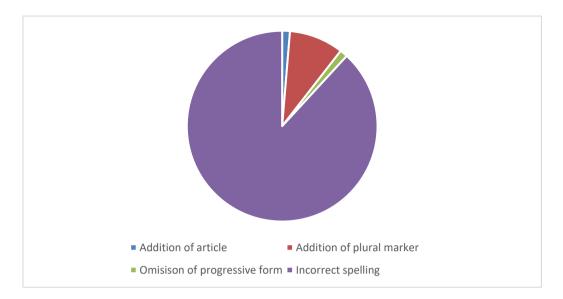


Chart 2: Distribution of types of other errors. Source: Own elaboration

The next group was then *ambiguous errors*, with 40 errors out of 275, which represented a 14.5% overall. This group of errors was also divided into some other 4 different types: inappropriate auxiliary, omission of article, omission of subject, and inappropriate article. In this case, the most repeated ambiguous error was the case of the omission of the subject with 17 errors. Students faced some problems when they had to include an impersonal subject in the sentences. Meanwhile, the least repeated type was the use of an inappropriate auxiliary, with just 2 errors detected as shown in chart 3.

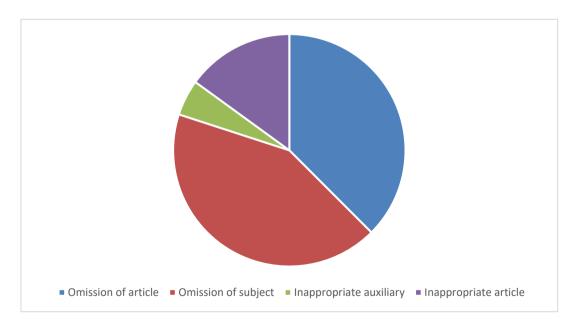


Chart 3: Distribution of types of ambiguous errors. Source: Own elaboration

Finally, the least represented group, contrary to the opinion of previous researchers, was that of *developmental errors* with a total of 38 errors, standing for a 13.8% as a whole. In this last group, 7 different types of developmental errors were distinguished: omission of an auxiliary, omission of plural marker, omission of regular past tense marker, omission of third person singular, inappropriate part of speech, incorrect auxiliary, and omission of infinitive marker "to". And since students had some problems when constructing sentences in a logical and natural order, the most frequent type of developmental error was the inappropriate part of speech with 13 errors. On the other hand, the omission of the regular past tense marker and the use of an incorrect auxiliary were just found once in either case.

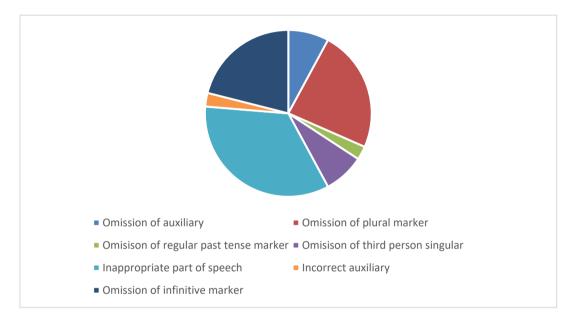


Chart 4: Distribution of types of developmental errors. Source: Own elaboration

As a concluding remark, we can end up recalling back the main information gathered along the article. The corpus of this research has been the analysis of errors in 70 essays written by engineering students in the last two academic years following the comparative taxonomy proposed by Dulay, Burt, and Krashen. In these essays, the most recurrent category of errors detected was that of interlingual errors, being the least one developmental errors. In between, we placed other errors in the second place and ambiguous errors in the third.

### References

Corder, J. P. (1981). Error Analysis and Interlanguage. Oxford: Oxford University Press.
 Dulay, H. & Burt, M. (1974). Errors and Strategies in Child Second Language Acquisition. Tesol Quarterly, 8, 129-136. https://doi.org/10.2307/3585536

Published by SCHOLINK INC.

- Dulay, H. & Burt, M. (1974). Natural sequences in child second language acquisition. Language Learning, 24(1), 23-40. https://doi.org/10.1111/j.1467-1770.1974.tb00234.x
- Dulay, H., Burt, M., & Krashen, S. (1982). Language Two. New York: Oxford University Press.
- Ellis, R. (1985). Understanding Second Language Acquisition. Oxford: Progress Press.
- Ellis, R. (2003). The Study of Second Language Acquisition. Oxford: Oxford University Press.
- George, V. (1972). Common Errors in Language Learning: Insights from English. Rowley: Newbury House.
- Hyland, K. (2003). Second Language Writing. Cambridge: Cambridge University Press.
- James, C. (1998). Errors in Language Learning and Use. London: Longman.
- Krashen, S. (1975). An error analysis of an advanced ESL learner: The importance of the monitor. *Working Papers on Bilingualism*, 7, 125-129.
- Lightbown, P. M., & Spada, N. (2006). How languages are learned. Oxford: Oxford University Press.
- Manchon Ruiz, R. M., Murphy, L., & Roca de Larios, J. (2007). Lexical retrieval processes and strategies in second language writing: a synthesis of empirical research. *International Journal of English Studies*, 7, 149-174.
- McDowell, L., & Liardet, C. (2020). Towards specialized language support. An elaborated framework for error analysis. *English for Specific Purposes*, 57, 16-28. https://doi.org/10.1016/j.esp.2019.09.001
- Murphy, L., & Roca de Larios, J. (2001). Some steps towards a socio-cognitive interpretation of second language composition processes. *International Journal of English Studies*, *1*, 25-45.
- Ramón, N. (2006). Multiple Modification in English and Spanish. International Journal of Corpus Linguistics, 11(4), 463-495. https://doi.org/10.1075/ijcl.11.4.06ram
- Richards, J. C. (1973). Error Analysis: Perspectives on Second Language Acquisition. London: Longman.
- Roca de Larios, J. (1996). Linearization strategies in ELF writing. Lenguaje y textos, 8, 191-208.
- Roca de Larios, J., Manchon Ruiz, R. M. & Murphy, L. (2007). Componentes básicos y evolutivos del proceso de formulación en la escritura de textos en lengua materna y lengua extranjera. *Revista Española de Lingüística Aplicada*, 20, 159-184.
- Saville-Troike, M. (2012). *Introducing Second Language Acquisition*. Cambridge: Cambridge University Press.
- Taylor, B. P. (1975). Adult language learning strategies and their pedagogical implications. *Tesol Quarterly*, 9, 391-399. https://doi.org/10.2307/3585623
- White, L. (1987). Error Analysis and Error Correction in Adult Learners of English as a Second Language. *Working Papers in Bilingualism*, 13, 42-58.
- Yin, R. K. (2003). Case study research: Design and methods. Thousand Oaks, CA: Sage.