Interdisciplinarity: discovering new horizons in the English Language Teaching

Gustavo Henrique da Silva Lima
Daniely Lopes Campos[*]
Universidade Federal de Pernambuco

Resumo:

Este artigo é o relato de uma experiência baseada num projeto desenvolvido em uma escola pública do Recife e tem como objetivo principal mostrar como atividades interdisciplinares podem ser eficazes frente à fragmentação de conteúdos nas aulas de Língua Inglesa.

In recent times, interdisciplinary studies are pointed out as the solution that will guide new perspectives of education in many countries. Nevertheless, there's no agreement among specialists about the best terminology to define them. Klein & Newell (1998:3), for instance, define interdisciplinarity "as a process of answering a question, solving a problem or addressing a topic that is too broad or complex to be dealt with adequately by a single discipline or profession". According to Moti Nissani[1] (1995), interdisciplinarity is "the bringing together of distinctive components of two or more disciplines". However, after analyzing all the concepts mentioned and considering the teaching/learning process, we decided to adopt the following concept: "interdisciplinarity is a way or method which searches, in sciences, for an integral knowledge to oppose the fragmentation of learning, stimulating cooperative ways to work that substitute the individualistic procedures" (cf. Gadotti, 1994 apud Campos, 2000:26).

According to the PCN's – MEC (1998: 37-38), the teaching of a foreign language should be integrated with other knowledge areas, as a way of developing students' new competencies, so that it is possible for the learner to use the foreign language, interrelated with the social context. Following this perspective, one can easily see how important interdisciplinary studies are in a language classroom. Unfortunately, experience shows that these studies are still scarce in Brazil. For this reason, we decided to develop a project on interdisciplinary activities which, from our point of view, can contribute to lessen the fragmentation of contents in English language classes which, nearly always, follow the principles of the Grammar Translation Method, which consists of deductive grammar teaching and translation.

Our project was carried out at Escola Marcelino Champagnat, a public secondary school, located in Tejipió, on the outskirts of Recife. The group chosen was the Second year which has 24 students of different ages (young people and adults). In the first class observed, we applied a questionnaire to the students as a way of

getting the information we needed for the project. We also observed the teacher's methodology and the students' behavior . The analysis of the questionnaire demonstrated that 46% of the students believed *grammar exercises* are one of the best activities in their English classes. According to this percentage, we could infer that students consider grammar as the main factor leading to an efficient learning of a foreign language. The graph below shows the students' answers compared to the activities done in the English classes:

GRAPH 1

Activities in English Classes
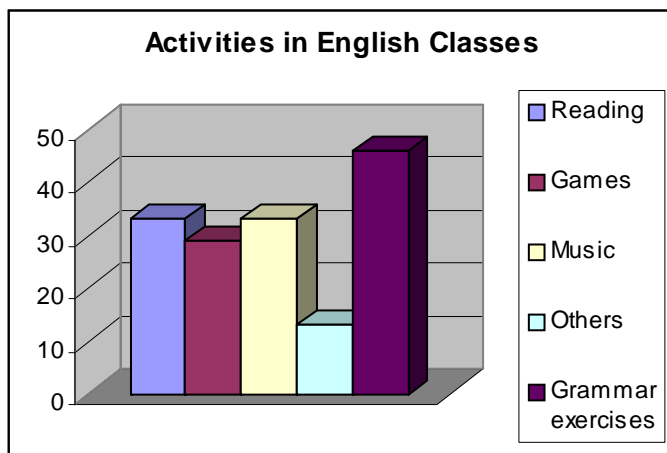
As can be seen, *Grammar exercises* are the favorite ones or maybe the most important kind of activity in the students' opinion. *Reading* and *Music* reached 33%, followed by *Games* (29%) and O*thers* (13%). It's important to remember that *Writing* activities were not included in the questionnaire, but they were mentioned by the students.

When the learners were interviewed about their purpose of learning a foreign language, we got the following results:

TABLE 1

According to the above Table, we can have a general idea of the public school students' interests in studying English. We believe that these results would not be very different from the ones we would get in private language courses, as learners' main interests for studying English would probably be *Work* and *Communication,* too.

In sum, all the information mentioned above was essential for us to have a picture of the students involved in English classes.

In the questionnaire, we also asked the students about interdisciplinarity with the purpose of checking their knowledge about the subject. However, most of the students didn't have any idea about it. Among those who gave definitions[2] we can list:

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[2] Our translation.

1. "it is an interaction among subjects." (R.K.F.M. - 16 years old)
2. "it is a relation between one subject and another one." (E.M.S. - 16 years old)
3. "it is the relation among subjects, that is to say, a work about one subject establishing a link among its components."(R.L.S. - 28 years old)
4. "it is the joining of subjects." (M.F.M. - 47 years old)

According to the concepts of interdisciplinarity mentioned in this article, definitions (1), (2) and (4) could be inserted in the general meaning of interdisciplinarity, however, the sentence (3) is not coherent, as the second statement contradicts the first one. In fact, it shows that the student does not appear to have a broad view of the theme. In relation to the activities used during the project, we explored knowledge from Geography, Mathematics and Sciences. The criteria used to design the activities were: group interaction, student's level and integration of the English Language with other knowledge areas.

As we can see below, the activities chosen coincided with the favorite subjects pointed out by the students in the research done:

TABLE 2

SUBJECTS	
1. MATHEMATICS	30%
2. GEOGRAPHY	15%
3. MOTHER TONGUE	15%
4. HISTORY	12%
5. SCIENCES	12%
6. ENGLISH	12%
7. LITERATURE	4%

These statistics reveal an unexpected result related to Mathematics, since that subject is generally strongly disliked by most students. However, the data confirm students' lack of interest in the English Language, which can be the consequence of the lessons' content and the methodology chosen by the teacher. By taking this information into account, we decided to focus on interaction and give the students enough opportunities to use the language, as our classes were based on the Communicative Approach.

ANALYSIS OF THE ACTIVITIES

The first subject chosen was Geography and the proposal was to explore regions, states and capitals of Brazil[3]. The material used was a map, through which the students could see and learn the political divisions of regions with their respective names in English. After that, we divided students in four groups of six people and gave each one of them a chart with the name of the regions (northeast, north, southeast, south, middle west) and some pieces of cardboard with the names of six

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[3] Activity adapted from LIMA, L.A. de. (1995). p. 89.

different states. The groups were supposed to discuss and classify the states according to the regions on the chart. After checking the chart with the students, we expanded this exercise asking each group to choose some states and ask the other groups about their capitals. In this kind of activity, the students had the opportunity to review a subject, they have probably studied in the First Grade, through a different perspective and in a more interactive way, which contributed to making the class enjoyable. The strategy of working with maps was used as a way to contextualize the subject matter in order to help the students have a general view about the location of regions and states.

Mathematics, which was pointed out by most of the learners as their favorite subject, was the second knowledge area we explored. We decided to work with numbers and symbols that involved calculation problems. To accomplish this activity, we used the following materials: poster with numbers (1-50), mathematical symbols (divided by, times, plus, minus and equals) printed on pieces of cardboard, a handout with a Puzzle Game, and sentences involving mathematical problems in English. After a brief review of the numbers and an introduction of the mathematical symbols, we asked the students, in groups of six, to fill in a puzzle game[4] with numbers and symbols. This kind of exercise was intended to develop and stimulate students' reasoning as they had to verify possibilities of combinations. Another task given was about how to solve sentences involving calculation problems[5], for instance, counting the number of legs of *Father, Mother and their three little girls*. It was a very interesting exercise because, to get the results of the sentences, the students had to make mental calculations. In sum, these two activities involved cognitive processes that were activated by the learners during the discussions in groups.

The third subject studied was related to Sciences and involved the environment and the description and classification of animals. We started the class by showing pictures of animals and asking some questions about them, for instance, *Where does it live?, What does it eat? Is it dangerous?, Is it big or small?...* This was the way we found of introducing and contextualizing the activities. Soon after, we divided the students in groups and asked each one to choose an animal. The other groups had to guess this animal by asking questions. For this exercise, we wrote some questions on the board as a guide for the students. The next activity was an *Animal Quiz*[6] in which the learners, in groups, had to associate each description with its respective animal. It was a good opportunity to learn about some animals and their way of life as well as a chance for the students to develop their reading skills. After finishing the task, we asked the students to fill in an *Animal Crossword*[7]. This activity was fun and had the objective of associating each animal's name to its respective picture. We expanded this exercise giving each group some pieces of cardboard with the names of animals. The students were supposed to classify the animals from the

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[4] Activity adapted from WHITNEY, N. (1997). p. 33.
[5] Activity adapted from WILLIAMS, D. H. & HERD, C. (1986). Word Games with English. Oxford, Heinemann, p. 16. *In* LIMA, L.A. de. (1995). P. 88.
[6] Activity from GRANGER (1988), p. 13. *In* LIMA, L.A. de. (1995). P. 100.
[7] Adapted from HILL, L.A. and POPKIN, P.R. (1974). A first crossword puzzle book. Oxford, Oxford University Press, p.5. *In* LIMA, L.A. de. (1995). P.94.

previous activity according to the classification (mammals, insects, reptiles and birds)[8], which helped them activate their previous knowledge about the subject. At the end of the class, we asked the students, in groups, to make posters about the environmental preservation according to some slogans[9] such as *Save the...! Don't destroy the...!, Protect the...! ...*, and to bring them for presentation in the following class. This activity was used as a way to help students become aware of the importance of nature in our lives. The presentations were a great success and the posters were displayed on the walls of the classroom.

After some classes exploring topics about Geography, Mathematics and Sciences, we decided to design a game named *Interdisciplinary Journey[10]*. This game was the most enjoyable and dynamic way we found for connecting those three areas and some others and the English Language, as well as to review the activities done in the previous classes. To play this game it is necessary to have a board, a dice and five counters (one for each player). The rules are:

1. The players have a route to follow. Each player throws the dice and goes forward the spaces that corresponds to the number on the dice;
2. The board is divided into discrete spaces, which contain questions from different knowledge areas. If the player stops at one of these spaces he/she has an opportunity to go forward three spaces if he/she answers the question correctly. Along the route, the players will also find some information that can help/retard them (*miss a go!; Throw again!; revenge day; lucky day; Go back; Danger)*;
3. The player that gets to the end first will be the winner of the *Interdisciplinary Journey*.

FINAL CONSIDERATIONS

Before making any comments on the experience, let's see how the students evaluated our project:

GRAPH 2

PROJECT EVALUATION

17%   0%

☐ EXCELLENT
☐ GOOD
☐ REGULAR

83%

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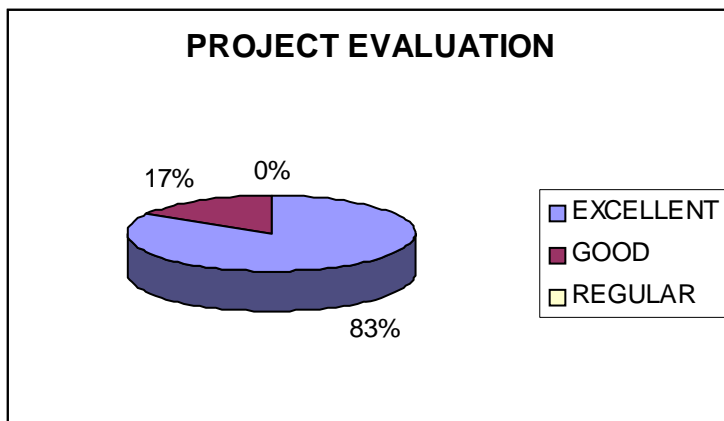
[8] Activity suggested by LIMA, L.A. de. (1995). P.95.
[9] Activity suggested by WHITNEY, N. (1997). p 49.
[10] Game adapted from WHITNEY, N. (1996). p.96. See Doc 1.

As we can see in the above graph, most of the students considered the project an excellent experience. This information also revealed how interdisciplinarity can be effective in dealing with the fragmentation of contents in English Language classes. Students who, at first, didn't have any idea about the subject, felt very satisfied and understood the main purpose of this project. Here are some of the students' comments[11] on the activities developed during the project:

1. "... Through interdisciplinarity, comprehension became easier" (M.F. – 36 years old)
2. "It was a new way to learn English and other subjects in English..." (E.M.S. – 17 years old)
3. "It was very good because, in general, we only learn verbs, proverbs, ..." (G.B.S. – 17 years old)
4. "It was a fun way to learn English" (A.P.M.F. – 15 years old)
5. "It helped in the interaction of the group" (M.F.S. – 15 years old)
6. "Living the English Language is an effective way to learn" (R.L.S. – 28 years old)

In spite of the challenges concerning the unfamiliarity of the students with the subject, as they were not used to learning according to this new teaching perspective, we would say the project was successful and got positive feedback from the students. The project results also showed that one of the greatest difficulties in improving public school teaching seems to be caused by the teachers' lack of information about interdisciplinarity and its importance in overcoming the fragmentation of contents. Thus, the way our classes were given was essential for this experience to be successful. Interaction was a result of group work and revealed to us an important aspect of the Sociointeractionist Approach in which language came up as a consequence of man's need to interact in labour situations in order to construct new knowledge. The subjects explored in our project were adapted according to the reality faced by public school students.

The objective of integrating English and other knowledge areas is, from our point of view, an unfinished task as there are still many things to do. However, we hope this paper will contribute to the development of an interdisciplinary awareness, on the part of teachers of English and teacher trainees, in order to help them provide situations which deal with different knowledge areas in their language classrooms. In this sense, we will be helping to make new horizons in the English Language Teaching ,at public schools, come true.

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[11] Information got from the questionnaire applied at the end of the project.

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DOC 1