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Alina Balagiu[1] and Corina Sandiuc[2]

[1]Associate Professor PhD, "Mircea cel Batran" Naval Academy, no 1, Fulgerului street, Constanta, Romania
[2]Senior Lecturer, "Mircea cel Batran" Naval Academy, no 1, Fulgerului street, Constanta, Romania
alinabalagiu@yahoo.com, alina.balagiu@anmb.ro

Abstract. Developing an English Academic Online Course for engineering is a complicated endeavor. The ultimate goal of any teacher or professor is to make the students learn circadian and consciously in order to remember the theory and to be able to apply it in the future job. Assessment of every progress of the student is almost impossible during a traditional course, taking into account the fact that the groups of students are quite large and the course or the seminar time is limited. Starting from these premises we have tried to develop an online course that gives the professor the opportunity to check, by means of computer, every progress in learning terminology in a foreign language. The structure of the course and the levels of learning are described in the paper.

Keywords: online course; ESP; material design; marine engineering

1. Introduction

As it has been stated in the specialty literature, the scarcity of the ESP materials for courses and seminars determines the Academic staff to create units for students of different specialties. This reason made us develop units for Marine Electrical Engineering with about the same structure: text followed by reading comprehension questions, vocabulary or terminology, and grammar or general vocabulary or speaking topics. The evaluation for the material was done in the traditional format of written test papers comprising the same general structure. The course itself has been validated for a couple of years, so that an online course with the same structure seemed to be the next logical step.

The online courses started to be developed in the 1990s (Jiang 1998) due to the existence of new technology in computers and especially internet. Research papers including recommendations for developing online courses were written starting with the first decade of the 21st century (Pollacia 2001). At the same time began the debates of researchers upon the benefits and drawbacks of teaching and learning using online courses ((Beynon, 2007; Clark, 2001; Kozma, 2001; Cavanaugh 2005). New developments in learning theories have been implemented from 2009-2010, when massive open online courses (MOOCs) started as ultimate way of using the technology for independent courses that could be used as they are or adapted to the necessities of teaching.

The experience gained in developing this online English course to be used for Marine Electrical Engineering might be beneficial to other university staff due to the fact that it is a way of continuously assessing learning and progress of students and above all it is a modality of "forcing" our students, in a subtle and pleasant way, to learn both specialty in English, which is important for their future job as engineers either at sea or on land, and elements of everyday vocabulary and grammar structures that are necessary in communication onboard ships with the multinational crews.

2. The structure of the course
2.1. The traditional course

The online course developed for marine engineering electrical specialty is based on a face to face student-centered course. For the traditional course the student was supposed to follow each step in the same pace with his mates, although the English knowledge levels were different. The same structure is used for all units.

The first part is an original specialty text that is used in traditional class for practicing reading skill followed by tasks or exercises for reading comprehension. Besides reading aloud some paragraphs and practicing the listening skill by being exposed to different types of pronunciation, the student should implicitly have to be exposed to the specific terminology and language structures from the context.

The second stage is the terminology itself that is selected from the text and translated into Romanian (in this specific case). There is also a part of terminology based on symbols that should be memorized by the students as being essential for the future job. The terminology should be read, understood and memorized by the students in order to be assessed through the tests given after three or four units. It was proved by the tests results that most of the students did not learn consciously so that at the end of the course they did not have the knowledge to be used in the next year of study and during the onboard training period.

The third part of the course is the grammar or general vocabulary part that should help students to get fluent and accurate in speaking. This stage includes verb tenses grammar review exercises and speaking structures to be rehearsed by means of exercises. The theory and the exercises used to be done in class, so that all students could participate and get familiar with the structures that were assessed in the test papers. Again the students proved not to master the grammar and general vocabulary knowledge as long as about 75% could not do the exercises correctly.

2.2. The online course

The online course is based on the above mentioned face to face course, with the same ten units division, the same structure for every unit, and the possibility for each unit to be studied and learned from home. For every stage of the course there is an assessment test that can be done five times, and at the same time the students can have access to the notes they made or the written course. The final grade is given by the last attempt, which is not necessarily the best attempt. There will be a maximum of 15 attempts for one course, which implies either challenging the student's memory every time for a better score or the student going through the materials and/or notes five times, if necessary.

2.2.1. Knowledge and symbols

For the first part, the text, there is an assessment test made up of about 10 items for the knowledge, based on reading, to which we have added 5 or 6 items for the electrical symbols. The knowledge items can be of different types:

- Questions with multiple answers – to select one; to select the wrong one; to select for a number on a picture;
- Questions with two answers – to select one;
- Match exercises - numbered parts of images from the unit to be matched with the names of those parts;

- True/ false statements;
- Fill in with multiple choice;
- Select words or phrases from a list;
- Multiple choice answer with one, two, three or all correct answers.

The symbols items, also included in the first assessment of each unit have less types of exercises because there are usually between minimum seven and maximum seventeen symbols per unit, making difficult a larger choice of item types. About 75% of the questions include images of the electric mechanic or automation symbols in different ways. They are all multiple choice questions of the following types:

- **What** is the **meaning of** the following **symbol**?
- **What** is the **name of** the following **symbol**?
- **What** is the **symbol** for………?
- **Which** of the following **symbols** is …………..?
- **Which** of the following **symbols** represents……….?
- **Which** of the symbols have the following **meaning**……….?
- The **meaning** of the symbol is…….. **What** is its **component name**?
- **Which** is **NOT** the **symbol for** a………..?
- Which **symbol** has the following **meaning**?

2.2.2. Vocabulary or terminology

The second part of the course is intrinsically connected to the first one, and consists in learning and eventually memorizing the vocabulary or the terminology that is the fundament of any ESP course. Most of the students have contact with the electrical terminology in English for the first time. Although they are already used to Romanian terms, it is very important for them to master the English terminology as long as most of them are going to work on ships as part of multinational crews.

The significant gain of the online course is the fact that they can actually see at least one picture of the electrical systems, circuits, machinery and panels and structures containing these onboard ships and ashore. For the verbs and phrases that cannot be illustrated the exercises are made in order to help the students understand the difference between the meaning of these items in general conversation and in their specific terminology. The assessment comprises 20-25 questions, mainly multiple choice of different types:

- The Romanian phrase "_____" can be translated into English as:
- The English phrase "_____" can be translated into Romanian as:
- Which picture illustrates a _____?
- The phrase "_____" means: (sometimes there can be more correct answers)
- The abbreviation "_____" means:
- Provide the correct phrase for the following definition:_____
- Which definition describes the word "_____" from the engineering terminology?
- The image represents:
- Choose the best translation for the following Romanian phrase:_____

There are also matching exercises for pictures and drawings:

- What are the component parts of the following picture?

2.2.3. Grammar and topics for conversation

The third part of the course is grammar and general vocabulary for usual conversation. The first four units are designated for review of tenses, each unit for a tense present, past and future and the fourth unit is a review all tenses. Starting with unit 5 this part of the course is designed to help students speaking in different situations such as: requesting, inviting, suggesting, apologizing, thanking, making excuses, giving opinions, agreeing and disagreeing, etc.

The exercises for the assessment are of different types and usually there are 15 items. They are fill in, multiple choice, tense recognition with multiple choice, drag and drop, match (two halves of the sentence), match a sentence with a situation, listening and writing, rephrase (multiple choice), rephrase (fill in),etc.

2.2.4. Testing

At the end of every unit there is a test made up of around thirty-five items. Out of these 43% is represented by grammar and conversation topics, about 28.5% is represented by vocabulary and 28.5% is represented by knowledge and symbols. There are also some new questions or items, minimum 2 and maximum 10 for each distinct part of the test.

There is also a term test that sums up questions for grammar, vocabulary and knowledge and symbols from each unit and also some new items or questions but not more that 2 or three for each unit. The highest percentage is given to the vocabulary that has 4 questions for a unit, while the knowledge and grammar have only 3 questions or items. In this way we try to reach the goals of the English teacher, terminology and grammar or general vocabulary.

Besides the term test, speaking skill is tested by means of a PowerPoint presentation. The students have to prove that they gained the tools for communicating about a specialty topic. The presentation is made in groups of four and it can be sustained video online in special circumstances.

3. Conclusion

There are some specific traits of this online course that makes it different from the MOOC trend. First of all the assessments or tests can be dealt with from home or work using any device, the only condition is not to change the device you have started working on. The tests can be done in class or at home but the students have only one try.

The students can learn and work on assessments at their own pace and when their biorhythm permits them to give the best results. They can try an assessment then go back to the course and try it again until the desired percent is attained. The process of reading the course several times or at least twice leads to learning and memorizing words, phrases, specific terminology, names of symbols, etc.

As we mentioned above one of the most important gains for the students is the fact that they can visualize the systems, circuits, devices and machineries they will work with and can make the connection between the English word or phrase and the image. The students seem to appreciate the independence of learning and the objectivity of the assessments. They need to work in order to get marks for each unit, consequently the process of learning is continuous and somehow willingly done.

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