

Developing An Interactive Digital Linguistic Game for Foreign Language Teaching

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Abstract. The study aims at developing an interactive digital linguistics game which can improve both grammatical and communicative competences in foreign language learning. The research approach used was Borg and Gall's Educational Research and Development. The development of the manual version of the game was in 2016 and the transformation to its digital version is still in an ongoing process. This article reports parts of the process of the development of the game by explaining the steps based on Borg and Gall's approach. During the development, the participants were French Department students, therefore the game was developed to improve the grammatical and communicative competence of French foreign language learners. The game is named *GoGrammar*. It focuses on morpho-syntax activities with which students can practice both grammatical knowledge and communicative skills in a fun way with direct feedbacks.

Keywords: *Digital, Linguistic Game, Foreign Language Teaching*

1 INTRODUCTION

Foreign language learning is a challenging process because learners are required not only to communicate using the foreign language, but also to use the correct grammar of the language. It is little wonder that language teachers might be tempted to disregard grammatical matters in favor of communication in language teaching or vice versa. However, it must be noticed that structure and communication are inseparable features of any language. As claimed by [1], language serves not only as a tool for communicating thoughts and emotions but also as a systematic set of rules and patterns. In fact, efficient communication cannot take place without correct grammar [2].

It is then necessary for teachers to maintain the balance between structural and communicative approaches in language teaching. This can be done by incorporating structural approach through linguistics and communicative approach, through games in language teaching. Linguistics will help students to develop their metalinguistic knowledge about the structure and patterns of the foreign language and to communicate in the language more accurately [3]. Games can be used to strengthen the communicative approach in language teaching since it can help teacher to create a meaningful context for students to communicate in the second language. Moreover, as digital gaming becomes part of everyday lives today, it can be an alternative in making language learning more enjoyable and practicable [2]. This study aims at developing an

interactive digital linguistics game which can improve both grammatical and communicative competences in foreign language learning.

1.1 Research Method

1.1.1 Related Research

Not much has been done on how to incorporate linguistics games to grammar classes. The first study is from [5] who investigated the perceptions of grammar instruction of six college level teachers who taught Spanish as a second language in a communicative language teaching (CLT) setting [5]. The study also examined how the teachers incorporated grammar in their CLT classrooms. The finding showed that there is a mixture of feelings and perceptions regarding grammar instruction in a CLT classroom. Some teachers believe that despite the advantages of teaching communicatively, having a variety of teaching methods with grammar is necessary. Half of the teachers involved in the study do not agree with the idea of including grammar explanations in a CLT classroom but the rest of them believe that adding grammar is necessary for their teaching [6]. To conclude, half of the teachers support the notion of engaging students in communication, but feel that teaching grammar is necessary since students need grammar to communicate [5]. However, the study does not discuss the solution on how to incorporate grammar in the CLT setting. This gap is closed in the current study which offers a teaching design incorporating both structural and communicative approaches.

The research approach used was the Educational Research and Development approach by adapting the Borg and Gall model [7]. This research approach is used to design, develop, test, and validate educational products to achieve the expected competencies [7]. The Borg and Gall models consist of the following ten main stages: (1) information collection or needs analysis; (2) and (3) consist of planning and initial development of product forms; (4) validation; (5) revision; (6) limited scale trial; and (7) product revision, (8) main field testing; (9) improvement of educational product based on main field testing; (10) dissemination and implementation. The study was firstly conducted in 2016 that is for the development of the manual form of the game. It was conducted at the Faculty of Cultural Studies, Universitas Brawijaya for 155 days (6 months). There were 20 student participants of the class 2015 from the French Study Program. The study also involved 2 teachers teaching the 2015 class. The steps of the research and the findings in each step are discussed in the findings section.

1.1.2 Product Development Process

1.1.2.1 Information Collection or Need Analysis

The information collection (need analysis) was conducted by doing interviews and questionnaires. The initial interviews with teachers and students were done in May, 30-31 2016 and June 1-2, 2016. The interviews were conducted with 20 French students and 2 French teachers in the Faculty of Cultural Studies, Universitas Brawijaya. Preliminary-questionnaire was then developed based on the results of initial interviews with teachers and students. The questionnaires for teachers and students were distributed in early September 2016. The preliminary questionnaires for students each consist of 3 questions with multiple choice answers and one open-ended answer 'others (please mention)....' as the last choice in every number. For

each question with multiple choice answers, the students were allowed to choose more than one answers. The questions are: (1) which grammar points you consider difficult to master?, (2) what barriers do you have when you are joining grammar class?, and (2) what difficulties do you have when you have to study grammar autonomously outside class? On the other hand, the preliminary questionnaire for teachers only consists of two questions with multiple choice answers and one open-ended answer: (1) which grammar points you consider difficult to teach?, and (2) what difficulties do you have when you are teaching grammar class? The difficulties in teaching and learning grammar shared by teachers and students are summed up in Table 1.

Table 1. Summary of questionnaires for teachers and students.

No	Teachers' difficulties	Students' difficulties
1.	Difficulties in teaching how to conjugate the verbs	Difficulties in conjugating verbs and to choose the correct tense, implementing tenses and constructing grammatical French sentences because of the differences between French and Indonesian morpho-syntax
2.	Difficulties in teaching vocabularies used in the grammar classes to the students	Lack of vocabulary to construct grammatical French sentences
3.	Grammar classes tend to be monotonous and lack of variation	Grammar classes are monotonous.
4.	There is a limited amount of time to do class exercises	Teachers move to another grammatical subject before students understand the previous materials.
5.	Students lack of motivation and interest to study French.	Classmates lack of motivation to study grammar, several friends are lazy. Students are affected by this.
6.	Students are reluctant to discuss their difficulties in learning grammar with their teachers.	Students are reluctant to ask questions to their teacher.
7.	Lack of facilities to teach grammar	The library does not offer adequate collection of grammar books.

1.1.2.2 Planning and Initial Development of Product

Based on the need analysis, the researchers planned the form of the game. Mainly the game must consist of parts of speech and then the students have to make sentences out of the parts of speech. The first design of the game consists of four packs of cards (see Figure 1) and a cardboard (see Figure 2). The four packs of cards are for a set of nouns, a set of verbs, a set of adjectives, and a set of adverbs. The cardboard consists of five slots to fit the cards in. Below are the pictures of the initial designs of the game.



Figure1. A set of noun cards.



Figure2. The cardboard to compose sentences.

1.1.2.3 Validation of the Product

At this phase, the validation process was done with the teachers and the students. The content of the game was revised as discussed with the teachers as the language expert. Then the initial design of the game was piloted to the students to see the clarity of the instructions. When playing the game, the students can take two cards from the noun set and a card from each of the three other sets [8]. Hence they have two nouns, a verb, an adjective and an adverb to begin the game. Afterwards, they can place the cards in the slots of the board game to create a grammatical sentence. The students then can write their sentences by using the correct conjugation and tense on the whiteboard so that their teacher and classmates can evaluate their mistakes and make

suggestions to improve the sentences [9]. During the game, the teacher takes note of the mistakes made by students and decides the winner of the game from those who make the least mistakes.

After the pilot of the draft of the game, the researcher distributed a questionnaire to the students to assess the game. The questionnaire consists of four questions and one question with open ended answer. As many as 14 students indicated that the game was enjoyable as seen by their choice of point a. Moreover, 16 students pointed that the game helped them to discuss grammar problems and they thought that the game helped them to compose grammatical sentences. The majority of the students, as many as 18 of them, indicated that the game helped them to recognize French word classes. As many as 14 students thought that the game helped them to learn to compose sentences and 17 indicated that they learnt how to conjugate verbs from the game. The majority of them also indicated that the game helped them to learn using adverb and adjective. In addition, they also indicated that the game made the lesson more varied and less monotonous [10]. The last question with open-ended answer resulted in the following answers: (1) The rule/mechanism of the game need to be made clearer. (2) Lecturer needs to provide rewards for the winner. (3) Sometimes there is a group member who does not know the rules of the game and it is annoying. (4) There are new vocabularies which makes the students have to memorize. (5) The competition in the second round was not conducive. (6) The look of the game can be improved to make it more interesting.

2.1 Results and Discussion

Based on the feedbacks as stated in the previous section, the researchers then improved the design of the first game. The revision was made by considering the look and the ease of playing the game. The revised game then was developed into the form of a board game. The look of the revised game is presented in Figure 3.



Figure3. *GoGrammar* Board Game

GoGrammar Board Game consists of list of verbs. It is accompanied by verb cards and prepositional cards that have been developed in the planning phase of the game (*GoGrammar*). The sample of the cards are presented previously in Picture 1. The rules of the games were also

revised. Based on the analysis of the questionnaire in the validation phase, the researchers revised the procedure of implementing the game as well.

In the limited scale trial, the participants were the same as those in the pilot phase. In the trial of *GoGrammar* Board Game, the implementation of the game was as follows. First, the researchers put the *GoGrammar* Board Game on the whiteboard. Then the researchers explain the rules of the game by showing the accompanying cards to the students. Additionally, the researchers write the main rules of the game on the whiteboard as the reference for the students during the game. The researchers also demonstrate the way to play the game. After that, the students are given chance to ask questions about the game and the rules. Then the researchers divide the class into two groups. Every time one team has a turn to play, two students come forward and play as the representatives from each group.

The players are to make sentences out of the verb from the board game, and noun and prepositions from the cards. The way to play the game is similar to the way to play snake and ladder game. The players start by rolling a dice. The dice is only used at the start of the game. The next steps are decided based on the score the team get from their answer. The one who get the higher number from the dice can start the game first. The player then takes a number of steps on the board game based on the number they get from the dice. When the player stops at one point, the player must make a sentence (a past tense) by using a verb that they get from the point at the board where they stop, two noun cards, and one preposition card.

They have to write down the answer on a piece of paper. The researcher then look at their answers and the players is given score. The score is used as the base for deciding how many steps they can take in the following turn. If a team get the score of 100 they can move forward 4 steps. If a team get a score of 75, they can move forward for 3 steps. If a team gets a score of 50, they can move forward for 2 steps. Finally, if a team gets a score of 25, they can move forward for 1 step. The winning group is the one who can reach the finish line first.

After the trial of the game, the researchers distributed a questionnaire. Students responses are positive towards *GoGrammar* Board Game. In responding to the first question in the questionnaire on their opinions about the game, 16 students think that *GoGrammar* Board Game encourages discussions with friends. This might be because they have to work in pairs in working on the sentences. 14 students stated that the game is fun, 12 students stated that the game helps them to understand the grammar rules in easier way, and 11 of them stated that the game train them to write sentences correctly.

Answering to the second question in the questionnaire about their difficulties in learning French Grammar they overcame by playing the game, 16 students stated that the game helps them in overcoming their difficulties in making sentences. 14 of the students stated that the game helped them to practice more about conjugating verb. 12 students stated that the game was useful for them in understanding more on the use of preposition.

The students' responses to question number 3 about their difficulties of learning grammar in the class were also positive. 12 students stated that the game improve the classroom situation because it can vary the way the lecture deliver the grammar lessons so that the lessons are not monotonous. 11 students stated that the game can help them overcome the difficulties to learn in the class. There are also 11 students stated that this game can overcome the problem of inadequate exercises. After getting feedback from the trial, the researchers started the work in transforming the game into digital version.

2 CONCLUSIONS

It can be concluded from the research that the difficulties teachers experience in teaching French as a foreign language, especially in balancing grammar and communication are: (1) difficulties in conjugating verbs and using tenses, (2) difficulties in dealing with vocabularies, (3) the monotony of the class, (4) limited amount of time to do class exercises, (5) lack of motivation to study grammar, (6) lack of motivation to consult with the teachers, and (7) lack of facilities for teaching grammar. To solve the above problems, the researchers are developing a Linguistics interactive game focused on morpho-syntax called *GoGrammar* boardgame which will be digitized. The results of the pilot and trial of the manual version of the game helps students to practice conjugation and increase their vocabularies in a fun and enjoyable manner while at the same time providing access for feedbacks. The game can be applied in the class by adjusting it to the grammar focus of a particular lesson. The rules of the game can be tailored by the teachers to accommodate the condition and the need of the class. The digital version of the game is in process of development.

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