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**La tecnología como
eje del cambio
metodológico**



**UNIVERSIDAD
DE MÁLAGA**

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FIVE TOOLS FOR FIVE CHALLENGES: DESIGNING A VIRTUAL BREAKOUT

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Abstract

The educative breakout is a type of microgamification implemented in the classroom and is aimed at generating significant learning in students. This significant learning is achieved by means of activities and tasks designed in the form of challenges students have to solve. However, today we have witnessed to a real change of context, as virtuality has been given priority over the face-to-face context so as to adapt to new settings and scenarios in education without impoverishing students' learning. In this line is where we present the work and the Project GAME-EDU. We have collected a series of tools to design virtual challenges in the framework of two groups, B and C, of a subject taught in English and Spanish, respectively. Thus, in this work we will describe the tools used to elaborate the challenges for the virtual breakout and will expose the ranking of favourite tools of participants from both groups.

Keywords

breakout, university, active methodology, gamification, virtual challenges.

Introduction

New forms of teaching in the classroom have been born to foster cooperative work and motivate students for the content acquisition of a certain subject. The well-known *escape room*, which in the society has even gained more supporters as an innovative leisure activity, has found its space in education as an innovative method for the teacher so as to gamify the classroom. The innovation with an escape room consists of establishing a puzzle (problem) to escape from a locked room (solution). Moreover, the global enigma is associated to the resolution of other halfway clues (or activities in the form of challenges) which are cooperatively solved.

Another resource similar to the escape rooms is the *educative breakout* which aims at solving a series of challenges in order to open a locked box with different padlocks. The box would contain a general clue to solve in teams or simply the mere prize of opening it, as in the case of the locked-room door in the escape rooms.

The teacher decides the prize when opening the box, although it is normally some reward to the winning team according to the necessities of the class where the game is implemented. Examples of reward could be: helping the teacher during a week, selecting the books for reading in class (in primary school) or some final points for global evaluation (in higher education context).

Nevertheless, apart from the reward, which undoubtedly is a motivating aspect of the game, some other important benefits of the implementation of the educative breakout that, on the other hand, are in accordance with the demands of European Higher Education Area (EHEA). Among the positive aspects, Negre (2017) highlights the following:

- Cooperative work.
- Use of digital tools and innovative technologies.
- Promotion of students' participation.
- Development of cognitive strategies for solving problems.
- Motivation.
- Development of critical and deductive thinking.
- Improvement of linguistic competente.
- Student-centred approach.

Taking into account these benefits, listed as well by other authors such as Álvarez González and Rodríguez-Pérez (2012), Gómez-Urquiza et al. (2019), and Moreno Fuentes (2019), in the Project GAME-EDU (PIE19-186) we aimed at implementing this active methodology to improve the learning quality of students.

In this paper, we will focus on describing some tools for the design of a virtual breakout. Finally, students participating in the virtual breakout will vote their favourite tools.

Description of the experience

The virtual breakout has been implemented in the subject “Fundamentos Teórico-Prácticos de la Enseñanza de la Lengua Extranjera”, during the second semester of the academic year 2019-2020, taking into account the circumstances in which the face-to-face teaching have suffered after declaring a state of alarm and subsequent lockdown due to Covid-19. The two virtual breakout experiences have been elaborated for two groups (B and C) of that subject in the degree of Primary Education at the University of Málaga.

Description of the context and participants

The virtual breakout has been designed in a entirely online context. A total of 13 teams in Group B and 22 teams in Group C participated in the virtual breakout. However, the final part of the breakout was voted by 51 participants from B and 52 from C.

Instruments

The five tools used to create the five challenges were:

Educaplay¹ is the perfect gamification tool to design a great variety of activities: crosswords, fill-in the blanks, wordsearch, matching game, memory game, quizzes, dictation games, etc.

Edpuzzle² allows the user to create interactive video lessons for students. The best aspect of this tool is that you, as a teacher, can elaborate questions (multiple choice or open-ended questions, for example) so as to check if your students have understood the content of the video.

Jigsawplanet³ is a tool for creating and sharing jigsaw puzzles. You upload your image and students have to rebuild it with the pieces.

¹ <https://www.educaplay.com/>

² <https://edpuzzle.com/>

³ <https://www.jigsawplanet.com/>

Kahoot! is considered a free game-based platform through which users generate interesting quizzes that students have to solve by using their computers or smartphones. The variety of questions that can be elaborated are multiple choice, open-ended questions, true or false, word clouds, puzzles, etc.

Traductormorse.com is a very simple and free online translator from Morse to plain text (ASCII) and from ASCII to Morse.

Procedure

A power point indicating the five challenges with the five tools were exposed. We used the same five tools for the two groups, though in B all the challenges were explained in English, and in C in Spanish. Once they had finished with the five challenges, they were asked to enter a code into *www.menti.com* (from the tool Mentimeter⁴) so as to vote, individually, for their favourite tools in the virtual breakout.

Results

This section will expose briefly the results obtained with the poll thrown by Mentimeter.

According to the ranking indicated in Mentimeter, participants in Group B voted Jigsawplanet as their favourite tool, followed closely by Educaplay (see Figure 1). The third position is held by Traductormorse.com, and finally the fourth and fifth positions are for Edpuzzle and Kahoot. The following screenshot illustrates the votation and ranking of the participants in group B.

⁴ <https://www.mentimeter.com/>

Which challenges and tools did you like most? Order according to your preferences.



Figure 1. Ranking of the tools preferred by participants from Group B in the virtual breakout

The other group, C, throws similar results as the first three positions are held by the three tools mentioned above, that is, Jigsawplanet (1st position), Educaplay (2nd position), and Traductormorse.com (3rd position). However, the last two positions differ from the votes found in the other group: Kahoot! (4th position) and Edpuzzle (5th position).

¿Qué herramientas y retos te han gustado más? Ordena de acuerdo con tus preferencias.



Figure 2. Ranking of the tools preferred by participants from Group C in the virtual breakout

Discussion and conclusions

Circumstances that occurred in the second semester from academic year 2019-2020 led us to redesign and adapt part of the Project GAME-EDU into an entirely virtual proposal of breakout. Even though more results would be obtained and discussed elsewhere, in this

paper we have focused on describing the tools used for our virtual breakout and showing the students' preferences after participating in it. According to the positive aspects mentioned before (Negre, 2017; Moreno, 2019, among other authors), in this work we can state that we promoted the use of technologies and the students' participation.

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