

The Use of Gamification and Digital Activities in A Foreign Language Online Class

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Abstract: Since the covid 19 Pandemic and the developing of online teaching, it was important to find some alternative teaching solutions to keep the learners motivated and focused on their learning processes. In this purpose, gamification, mainly *Kahoot*, as well as some digital activities were introduced in my French as a foreign language course. The aim of this study is to examine the students' attitude and perception regarding the use of *Kahoot* and digital activities. This study is undertaken in a French language elective course at the university. 160 beginner students are enrolled. The study implements a survey approach that regroups quantitative and qualitative data collected from a 24-question-questionnaire. The results show that a big portion of the respondents like using *Kahoot* as it brings fun, challenge and motivation to the class. The digital activities are appreciated as well as they permit to the students to have more practice.

Keywords: Gamification, Kahoot, Digital activities, Online teaching, French as a foreign language.

Introduction

Many educational institutions moved to the online teaching after the Covid-19 Pandemic. One of the biggest challenges we have to face is keeping the learners engaged in their learning processes. Case studies, flipped learning, social media, gamification are new methods of non-traditional teaching (Safapour, Kermanshachi & Taneja, 2019). They all aim to make students more active in their learning process.

In my French as a foreign language (FFL) elective class at the university, the flipped learning methodology was implemented. In order to motivate the students to prepare for the session, gamification was introduced as well. The game-based student respondent system *Kahoot* was used on regular basis as well as some digital activities that were created to help the students practicing more.

In this presentation, I will focus on the learners' attitude and perception regarding the gamification used in class (*Kahoot*) and outside the class (the digital activities). First, I will start by presenting the gamification, and review some studies that focused on the use of *Kahoot*. Then, I will present the questionnaire given to my

students to assess the learners' approach regarding *Kahoot* and the digital activities I created. Next, I will present the results. Finally, I will discuss the results and present some recommendations for further research.

Gamification and digital activities

Definition

Gamification is usually identified as ‘*the use of game-design elements in non-game context*’ p.2425 (Deterding, Sicart, Nacke, O'Hara, & Dixon, 2011). The purpose is to “*improve user experience and user engagement in non-game services and applications*” (p.2426) (Deterding, Sicart, Nacke, O'Hara, & Dixon, 2011). It was first introduced in marketing and then in education to teach different subjects as pharmacy (Jones & Wisniewski, 2019), economics (Wardoyo, 2021), maths (Jagušt, Botički, & So, 2018), social and civic skills (Campillo-Ferrer, Miralles-Martínez, & Sánchez-Ibáñez, 2020) and languages (Ebadi, Rasouli, & Mohamadi, 2021).

Gamification involves the integration of game patterns in educational context (Buckley & Doyle, 2016). A variety of forms of gamification can be used in education: narratives to change the context around a typical activity, social competition, incentivizing through pontification, leaderboard, are some examples of games the learners can play (Hanus & Fox, 2015). The leaderboard shared with all the players creates a competitive atmosphere. Indeed, the ranking system motivates the participants that can see immediately their effort rewarded (Buckley & Doyle, 2016). The reward system is a part of the game. Each learner/player receives a reward for achieving a goal or passing to an upper level (Buckley & Doyle, 2016). Not only rewards but different game mechanics can be applied in teaching and learning such as points, levels, progression, notification (as acknowledgment of successfully completed) (Mohamad, Salam, & Bakar, 2017).

While playing, learners can go through a wide range of emotions: frustration, pride, joy, optimism (Lee & Hammer, 2011). Gamification is linked not only to success but to failure as well, however, giving prompt feedback to the learner, allowing him/her to play again as many times as needed, helps to maintain a “positive relationship with failure” (p. 1164) (Buckley & Doyle, 2016) which is not considered as an ending anymore but as a step in the learning process.

Literature Review

Many studies revealed the positive effect of gamification in the learning process. Some scholars (Buckley & Doyle, 2016) note that gamified learning has a positive impact on students' learning. However, the students' motivation (intrinsically and extrinsically) has an important impact on the results. In another study conducted with English language learners, (Hwang, Hsu, Lai, & Hsueh, 2017) note that the gaming methodology benefited the students at 2 levels: their learning achievement and also their motivation. In flipped learning classes, (Huang, Hew, & Lo, 2019) notice that students that had gamified learning had better results. Besides, the gamification enhances students' engagement as students were more likely to complete the pre-class activities. However, some

studies recommend not to use gamification permanently (Sanchez, Langer & Kaur 2020). The “wear out effect” can reduce the students’ engagement (Wang, 2015).

Many platforms are available online, most of them for free, to help instructors introducing gamification in their classes. Quizzlet, Socrative, PollEverywhere and *Kahoot* are some examples. Many studies conducted on the use of *Kahoot* highlight the positive effect of the platform on the classes. (Wang, Zhu, & Sætre, 2016) notice a significant improvement in the student’s motivation, engagement, concentration and enjoyment. However, they did not find any significant improvement in the learning process.

Several advantages of *Kahoot* are mentioned by (Campillo-Ferrer, Miralles-Martínez & Sánchez-Ibáñez, 2020): It encourages creativity, increases students motivation and engagement, contributes to a better understanding of the content (social and Civil skills), has a friendly user interface / easy to use. Besides, it is easily accessible (laptop, phone, etc.) and allows a synchronous interaction. The scholars also note that this game improves concentration and helps the users to revise the learning content. Students who play *Kahoot* often have better results. Nevertheless, using *Kahoot* in class brings some extra work for teachers that have also to integrate the digital content into the lesson plans. The authors mention also that not all students like to play an active role in class. A fear of making mistakes in public may block some students. In addition, (Licorish, Owen, & George, 2018) notice that the use of *Kahoot* in the class improve students’ learning experience. Students are less distracted and more engaged. In another study conducted on 54 students learning English for media and using *Kahoot* weekly during 14 weeks, (Tan Ai Lin, Ganapathy, & Kaur, 2018) note that *kahoot* reinforced the students’ knowledge, challenged the learners and captivated them.

Another learning application available for free on internet is *LearningApps.org*. It allows the creation of different activities such as word matching, crosswords, ordering, the millionaire, etc. The instructor can create a wide panel of activities and can choose how to reward the students: points, levels, forbid moving to the next question unless you give a correct answer, smiles, feedback, incentive sentence, congratulation, etc. Learners can fail and repeat, restart and play again (Hanus, Fox, 2015). This possibility to repeat and solve again increases their engagement (Lee & Hammer, 2011). Besides, it allows the students with low participation in class to do online activities with gamification techniques (da Rocha Seixas, Gomes, & de Melo Filho, 2016).

Methods

Participants

160 students enrolled in my French language course in Fall 21 (some of them dropped the course). This university elective course is a foreign language course for beginners and remains a full semester (we met twice a week during 15 weeks). The classes are given online. Flipped learning methodology is applied in this course: students prepare the content of the course before the session. They have to solve some Preparatory Activities

(PA) before attending the session. Once we meet, we practice and focus on their questions and the difficulties they are facing.

During the semester, students prepared 20 PA. They had one session on *Kahoot* at the beginning of the class to check if they prepared the PA and if they understood and to check their weaknesses (questions are from the PA). A second quiz on *Kahoot* comes at the end of the class (questions are from the practise). A five-question quiz was presented at each session on *Kahoot*. Students had 30 seconds to answer to each question while listening to a motivating music. Each student gets immediately feedback on the correctness of the answer given, the points earned and the ranking. At the end of the game, the names of the five top students and the total points earned appear on a leaderboard and are shared with everyone. The forty-two *Kahoot* games presented (40 quizzes linked to specific content and 2 revision sessions made of 15 questions each) have not been made public to encourage the students to play during our class time. As the classes are recorded, students can watch the games again (but not play them another time).

On another hand, 25 Digital Activities (DA) have been created (7 in Liveworksheets / 18 in LearningApps). Students were free to solve the ones they wanted, whenever they desired and as many times as they needed. They are available in the Discussion forum on the MLS we are using to offer the online course, Blackboard.

Purpose of the study

The purpose of this study is to assess the learners' experience regarding *kahoot* and digital activities used in the course. Two research questions are set:

RQ 1: What are the students' attitude and perception regarding Kahoot?

RQ2: What are the students' attitude and perception regarding digital activities?

Data collection

A questionnaire was prepared to answer the research questions. Students were invited but not obliged to fill it. The answers were anonymous. The questionnaire was presented at the end of the semester and available for two weeks on the LMS used for our classes: Blackboard.

A survey made of 24 questions was designed to assess students' attitude and perception regarding *Kahoot* and DA. The questions were distributed as following:

- 1 - four scales question (population / Student's year)
- 10 - Five-scales questions (*Kahoot!*)
- 4 - Five-scales questions (DA)
- 1 - ordering activities (DA)
- 2 / Five-scales questions (FL)
- 3 open questions (*Kahoot!*)

- 2 open questions (DA)
- 1 open question (general)

Some questions were inspired from Tan Ai Lin, D., Ganapathy, M., & Kaur, M. (2018). As their questionnaire was tested with some other students enrolled in an English for media course at a university in Malaysia, I thought that having some close questions could allow some comparisons.

Results

The first question asked allowed us to know the level of the students that enrolled in the FFL class: 33 % of the respondents are senior students, 31% are Junior, 19 % sophomore and 17 % freshman. Most of the students have experienced the university live and took already many courses at the university.

Table 1. Students' Attitude Regarding *Kahoot*

Statement	Strongly agree	Agree	Disagree	Strongly disagree	Neither agree nor disagree
1. I look forward to playing <i>Kahoot!</i>	73	21	1	0	5
2. I am eager to learn via <i>Kahoot!</i>	58	29	9	0	4
3. I prepare the AP in order to win in <i>Kahoot!</i>	46	36	4	3	11
4. I focus on the items or questions in each <i>Kahoot!</i> session.	62	32	4	0	2
5. I am motivated by the prospect of winning in these <i>Kahoot!</i> sessions.	64	23	4	1	8
6. I feel more motivated when I earn points in <i>Kahoot!</i> session.	67	26	3	0	4
7. I respond to each item or question in each <i>Kahoot!</i> session.	64	33	2	0	1
8. I respond as accurately as possible to each item or question in each <i>Kahoot!</i> session.	63	35	0	0	2

73 % of the students “strongly agree” and 21 % agree on the statement “*I look forward to playing Kahoot!*”. They like *kahoot* and they are looking forward to playing it. Most of the respondents focus on each question (62 % strongly agree and 32 % agree). Only 4 % of the respondents disagreed on that statement. Globally, the respondents answered to each item (64 % strongly agree and 33 % agree) and they responded as accurately as possible (63 % strongly agree and 35 % agree). The respondents are motivated by the prospect of winning in *Kahoot* (64 % strongly agree and 23 % agree). When they earn points on *Kahoot*, the respondents feel more motivated (67 % strongly agree and 26 % agree).

To the statement “*I prepare the AP in order to win in Kahoot*” 46 % of the respondents strongly agreed and 23 % agreed. However, 4 % disagreed and 3 % strongly disagreed, while 11 % of the respondents neither agree nor disagree.

Table 2. Students' Perception Regarding *Kahoot!*

Statement	Strongly agree	Agree	Disagree	Strongly disagree	Neither agree nor disagree
There is a value in using <i>Kahoot!</i> for teaching and learning purposes.	73	24	0	0	3
<i>Kahoot!</i> helps me in my learning process.	66	29	3	1	1

73% of the respondents strongly agree and 24 % agree that using *Kahoot!* for teaching and learning purposes adds a value. 66 % strongly agree and 29 % agree that *Kahoot!* helps them in their learning processes only 3 % of the respondents disagree on that statement and 1 % strongly disagree on it.

Table 3. Students' Perception Regarding *DA*

Statement	Strongly agree	Agree	Disagree	Strongly disagree	Neither agree nor disagree
The use of interactive activities (in BB / Discussion) helps you learning.	68	26	3	2	3
The forum (Discussion) is useful	59	34	5	0	2

Respondents agree (68 % strongly agree and 26 % agree) on the fact that the *DA* help them learning and practicing. Only 3 % of the respondents disagree on that statement and 2 % strongly disagree.

Table 4. Students' Grading of the *DA*

Statement	5	4	3	2	1
On a scale of 1 to 5 (where 5 is the highest), you would rate the use of interactive activities as:	60	24	7	2	1

On a scale of 1 to 5 where 5 is the highest 60 % of the respondents rated the *DA* 5 and 24 % rated it 4. 7 % of the respondents gave a medium rate 3, and 2 % rated it 2.

Table 5. Students' Attitude Regarding *DA*

Statement	Very often	Often	Not that often	Very few times	Never
How often do you solve the interactive activities posted on BB / Discussion?	33	42	18	5	2

The respondents use the *DA* very often (33 %), often (42 %) and not that often (18%). Only 5 % of the respondents said using them very few times and 2 % never.

In the first open question, the respondents were free to write whatever they felt regarding the advantages of

using *Kahoot*. Their answers are regrouped into several categories (Table 6). Some quotations from students' answers are selected as examples. The respondents stated that *Kahoot* is motivating. It encourages them to learn and help them to focus while playing. Some other respondents said that *Kahoot* helps them to memorize and to better understand as “*It clarifies the topics for me and with it I can make sure I really understood the topics*”. Some respondents appreciate also the challenge spirit *Kahoot* brings and like the “*healthy competition between students*”. Some respondents like the fun part of *Kahoot* and some others appreciate the energy it brings to the class.

Table 6. What are the Advantages of Using *Kahoot* ?

Topic	Quotation / Example
Motivating	<p>“It motivates me to learn more and do the APs to get the first place”</p> <p>“Get excited to solve more and if I have some question wrong so I go back and correct it”</p> <p>“To win in <i>kahoot</i> we should study and it helped me to study”</p> <p>“Motivates me to study more”</p> <p>“It encourages me to stay on track and study for the course material day by day”</p> <p>“Encourages everyone to try their best”</p>
Focus	<p>“Helps me a lot to focus and learn how to solve quickly”.</p> <p>“Since we are learning online sometimes, we get distracted, with <i>kahoot</i> I am fully focused”</p> <p>“Help us stay to apply what we learned and stay focused”</p>
Energy	<p>“It adds colors and energy to the class”</p>
Challenging	<p>“You can challenge yourself while using <i>Kahoot</i>”</p>
Understand	<p>“It clarifies the topics for me and with it I can make sure I really understood the topics”</p>
Memorize	<p>“Makes the information learnt more memorable”</p> <p>“Makes the information stick and I never forget it”</p>
Test the knowledge	<p>“<i>Kahoot</i> helps me study and test my knowledge”</p>
Fun	<p>“It makes studying more fun”</p> <p>« Fun way to learn »</p>
Competition	<p>« Healthy competition between students »</p> <p>« Motivating, creation competition feelings, fun and enjoyable language learning”.</p>
Learn	<p>“It helps me learn faster, and never forget the information”</p> <p>“It makes the learning easy as I am a visual learner”</p>

In a second open question, students were invited to state what the disadvantages of *Kahoot* are according to them (Table 7). Most of the respondents said they do not see any disadvantage. Some respondents complained about the connection issues (internet interruption) that prevent them of playing *Kahoot*. Some others consider that 30 seconds to answer a question is not enough. Some respondents consider the competition as a disadvantage as they have to answer very fast. In that hurry they may select wrong answers. Some students would like to see the name and ranking of all the players not only the winners (5 first ones). Another student sees as a disadvantage the fact that they cannot keep a version of the questions. I decided to keep the *Kahoot* sessions private to motivate the students to participate to the “unique” session. Some respondents noticed that sometimes they are not prepared: this disadvantage here is linked to the Flipped learning methodology not really to *Kahoot*.

Table 7. What Are the Disadvantages of Using *Kahoot* ?

Topic	Quotations / Examples
None	<p>“No disadvantages”</p> <p>“I don't think there are any!”</p> <p>“Nothing they are really very helpful”</p>
Internet connexion	<p>“There may be sudden connection issues from students’ side that prevent them from participating in the <i>Kahoot</i>”.</p>
Time	<p>“It is very fast paced and lags sometimes”</p> <p>“The time for each question is not enough sometimes”</p>
Competition	<p>“I must answer quickly to get points because we are competitive with each other to have the best place as better as we can, and that makes me hurry and I will answer wrong answers sometimes”</p> <p>“Unfair regarding points counting since it depends on time and when I give the correct answer and get low points I get discouraged”</p>
Layout	<p>« No leaderboard but show everyone’s rank »</p> <p>“Questions are not displayed on the app”.</p> <p>“We as students do not have a way to keep a version of the question”</p>
Not prepared	<p>“Sometimes some of us are not prepared”</p>

In a last open question linked to *Kahoot*, students were asked to state whatever they feel about this experience (Table 8). The respondents stated that the experience was efficient. Some respondents wished being able to use *Kahoot* in some other courses as they could notice the benefit of this game in their learning processes. One respondent concluded “more *Kahoots*!”.

Table 8. Please State Any Comment You Wish to Make About This Experience with *Kahoot!*

Topic	Quotations / Examples
Using it in other courses	“I wish all doctors used <i>kahoot</i> more often, it is an excellent interactive teaching and learning method”.
Experience	“keep using <i>kahoot</i> its very interactive and fun for students, it was a very nice experience” “French is the only course where the Drs use <i>Kahoot</i> (or any interactive games) and I can really see how I'm benefiting from it compared to the other courses that don't have <i>Kahoot</i> sessions”
Efficient	“It's a good way to let us practice and its fantastic” “overall very fun and the way it is used in this course plays an efficient and effective roll in the learning/teaching process” “Interactive, competitive, fun, their music!” « more <i>kahoots!</i> »

Table 9. What Are the Advantages of Using *DA*?

Topic	Quotations / Examples
Practicing	“Learn from it and test myself after studying” “Gives you helpful activities to practice and improve at your own pace”. “It's a good source of practice and really helpful” “Can be solved many times and at anytime” “Hepls me know what my weak points are”
Memorizing	“Good for practice, helps with the memory” « Helps learn faster »
Revision of exams	« Preparation for exams » “They are amazing as a practice quiz before exams or quizzes” “They are an excellent way to test yourself before any sort of quiz to know what you need to work on more”
Accessible	« Very fun and easily accessible »
Check the answers	“We can check our answers, if they are wrong we can ask the Dr. to clarify in the next session” “It really made me know my mistakes”
Layout	“They depend on visuals, thus sometimes I remember the answers in exams because of remembering the pictures and colors”

In another open question, students were invited to present the advantages of *DA* according to them (Table 9). Many respondents stated that *DA* help them to practice. Learners appreciate the fact that the *DA* are accessible and they can solve them as many times as they want. Checking the answers is another advantage they find. The

respondents like having the possibility to know immediately their mistakes. It is a good preparation for exam according to some respondents. Some others appreciate the fact that DA depend on visual. It helps them to memorize.

On a last open question regarding DA, students were asked to present the disadvantages of using these activities (Table 10). Almost all the respondents said they do not see any. One student regrets not having feedback from a human: these activities '*are not very social*' according to him /her.

Table 10. What are the Disadvantages of Using DA?

Topic	Quotations / Examples
None	"I don't think there are any!" "Nothing they are really very helpful"
No feedback from a human	"They are not very social because I don't get feedback from human"

Discussion

The questionnaire presented to the students allows us to assess their opinion regarding the use of *kahoot* and DA in the course. Different DA were created using *LearningApps* and *Liveworksheets* (7 *Liveworksheets* / 18 *LearningApps*). 60% of the respondents rated these activities the maximum: 5/5 and 24% rated them 4/5. Only 2 % of the respondents said they have never used these activities. The respondents appreciated these activities. They liked the fact that they "*depend on visuals*" which helped them for memorization. Besides, the respondents found these activities "*easily accessible*" and helpful for practicing and preparing the quizzes and exams. Unfortunately, I did not find studies conducted on the use of activities created in *LearningApps*. I cannot compare with other results.

Besides, as I used a lot *Kahoot* in my online classes (42 *Kahoot* sessions during the term), I was afraid that students felt bored and gave up. Their engagement in the course as well as their motivation could have been affected. However, the answers given by the students confirm the opposite. Indeed, the general trend is by far: students enjoyed using *Kahoot* in the course and were looking to playing it. Students appreciated using this platform. In the open questions, most of the respondents stated that *Kahoot* motivates them, helps them to focus and challenges them. It also brings fun to the session according to the respondents.

Still, preparing the PA to win in *Kahoot* does not seem to be a motivation. The respondents are motivated to win *Kahoot* but 7% said do not prepare the PA to win *Kahoot*. Wining *Kahoot* does not seem to motivate them enough to prepare PA. To the statement '*I prepare the PA in order to win in Kahoot*' 46 % strongly agreed, 36 % agreed, 11% neither agreed nor disagreed and 4 % disagreed and 3 % strongly disagreed.

As disadvantages for using *Kahoot*, technical problems have been raised by the respondents: internet issues and

disconnection from *Kahoot*. Some other students find that 30 seconds to answer to the questions are not enough. They find this 'short' time as a disadvantage. If I give them more time and make it 1 minute (which is the next amount of time we can offer by question), it will be too much time and the challenging spirit may disappear. Students may feel bored at that time waiting for the minute to end. In one open question, where students were free to state whatever, they wish regarding *Kahoot*, none of them have said they do not like this platform, nor complained having too much *kahoot*. In the contrary, some respondents said wishing using this platform in some other courses. Another student asked not to stop using *Kahoot*, and another one said '*more Kahoot*'.

Further, as I said previously, some of the questions asked in this questionnaire are inspired from Tan Ai Lin, D., Ganapathy, M., & Kaur, M. (2018). If we compare the results of this questionnaire with ours, we notice the same trend. Students enjoy using *Kahoot*. We notice in our questionnaire that more students strongly agree to the statement "*I look forward for playing Kahoot*" 73 % in our study and 64 % in the other study. Besides, more respondents are strongly agreeing to the statement '*I am motivated by the prospect of wining Kahoot*'. 64 % in our study, 51 % in the other one. Yet, we notice that more students strongly agree to the statement "*I respond as accurately as possible to each item or question in each Kahoot ! session*". 63 % in our study, 43 % in the other. However, the results of my questionnaire have to be taken with caution. Not all the students that were invited to fill the questionnaire did it (as they were invited but not forced to do it). 94 students out the 158 responded. I will present again the same questionnaire to another group of students to get more reliable results, this term SP22, I kept using the Flipped learning methodology and introduced *Kahoot* and the digital activities as well. I will ask the students to answer the same questionnaire and will compare the results.

Conclusion

The purpose of the study is to check the attitude of students taking a French as a foreign language course regarding the use of DA and *Kahoot* in this online course. The main contribution of this study is confirming that students do not get tired of using *Kahoot* nor the digital activities created. The respondents are motivated and engaged. They appreciate these challenging games that help them to memorize and practice.

The limitation of this study is related to the percentage of respondents. 60 % of the students enrolled in the course respondent. A further study where the same questionnaire is presented to some other students taking the same course and in which the same procedure is followed should be done.

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