

## Article:

### *SMS as a learning tool: an experimental study*

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#### **Abstract**

The aim of this experimental study was to find out the potential of using mobile phones in teaching English as a foreign language, specifically the use of SMS as a support tool in the EFL class. The research questions formulated were: (1) Is using SMS messages via a mobile phone an effective tool in terms of motivation and engagement? (2) What type of mini-lessons do subjects think are better to be sent via SMS in terms of effectiveness, engagement, and usefulness for their learning purposes? (3) What is the appropriate timing for the activities to be sent? (4) Did students who participated in the project perform better than the control group?

This experimental study lasted two academic years. As this was a preliminary study of the viability of the SMS methodology, it was conducted with a small group of students (n=13) from the English Degree at the University Rovira i Virgili (Tarragona, Spain). During the first year we designed various types of activities and sent them through a period of 15 weeks. The aim of this first part was to answer the research questions 1 to 3. The second year, a new set of exercises was created. This time, the aim was to gather data to be able to answer the fourth research question. Both qualitative data (from the first year) and quantitative data (from the second year) were analysed.

We can conclude that the subjects have found this experience engaging. The subjects preferred receiving short, direct exercises which could be answered immediately. They preferred receiving the SMS in the afternoon or evening and the results show that this methodology enhances the retrieval of memorized English language rules.

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**Keywords:** e-Learning, m-Learning, SMS, distance learning, new language teaching methodology.

#### **1. Introduction**

In recent years there has been considerable progress in various areas of distance education in Spain thanks to the introduction of e-learning practices. In contrast, applications relating to mobile learning may be said to be still at an early stage of development. M-learning is typically identified by two basic factors: 1) the fact that it can be used "anywhere, anytime" (Geddes, 2004), and 2) because the technology used is affordable for many users and technically simple to use.

This idea of using a mobile phone as a support tool for working alone on assigned tasks is supported by researchers such as, Lu (2008), Kennedy and Levy (2008), and Cavus and Ibrahim (2009). Thornton and Houser state that:

*The teacher must make difficult choices about how to use that limited time [class time] to promote language learning. Since foreign language students usually have opportunities to speak and hear the target language in the classroom, it makes sense to use as much class time as possible in communication activities. This means that other kinds of practice and exposure must be provided in other ways. We believe that mobile technology can help extend learners opportunities in meaningful ways. (2005: 218).*

Traxler believes that while the book format constrains knowledge to a linear format, web-based formats present information in a richer way, since all the bits of information are linked to endless sources of information. He also contends that "Mobile devices, systems and technologies also have a direct and pervasive impact on knowledge itself, and how it is generated, transmitted, owned, valued and consumed in our societies" (2009: 8). At the same time, this fact has changed the way in which knowledge is transmitted, because it is now presented in "smaller chunks governed by the heuristic of usability and increased non-linear navigational complexity." (2009: 9). The following technological step, that is, the use of mobile phones as a device to transmit information, has also had an impact on knowledge, since we send big amounts of information in "small disconnected and trivial chunks" (2009: 9). On the other hand, this methodology has proven to be very personal and spontaneous; it can be used anytime, anywhere and these characteristics reinforce the students' sense of control over their learning process. It can also supplement other methods of learning and teaching, or even replace them. It can also be tailored to each specific learning situation like any other method. So (2009) explains that we cannot assume that all learners have PDAs, netbooks, etc., but we can be sure that almost all our subjects carry basic mobile phones which are mainly used for voice and SMS communication. Therefore, when we "consider ubiquitous access (other than web-based access) for teaching and learning foreign languages, we must employ basic and trusted technologies such as SMS to connect with our students" (2009:113). Thus, the basic principle in our experimental study follows So's recommendations.

## **2. Using Mobile Phones in Foreign Language Teaching**

According to Pownell and Bailey (2001) "handheld computers are at the forefront of the fourth wave in evolution of educational technology." The first wave started before the 70's; the second started when desktop computers appeared (around the 70's). The third, started in the 90's with the appearance of the Internet and the World Wide Web. In the year 2001 the fourth wave started as palmtop computers and mobile phones began to spread. For Stockwell (2007), this last stage of CALL can be considered "integrative", which means that subjects use a wider variety of technological tools, and thus learning a language does not only happen in a laboratory or a classroom but it is a continuous activity. He also believes (2010) that the popularity of mobile phones is due to their rapid spread on the market, their lower prices (compared to laptop computers) and the simplicity of their use. In spite of the drawbacks of mobile phones pointed out by Stockwell (2007), many institutions and teachers see mobile phones as their best technological option within the field of m-learning.

Usability is also a current issue in the field of mobile learning (Kukulska-Hulme et al., 2007; Churchill and Hedberg, 2008; Gu et al., 2011). Gu et al. (2011) identified a set of design principles for (a) content, (b) activity and (c) usability. The content (a) has to be practical and micro; that is, it has to address practical needs of the learner. These self-contained learning objects have to fit into small slots of time. The activity (b) has to be micro and simple; that is, each activity should be made through one action "such as listening, reading or pushing a button to input feedback (Gu, 2011:4). The usability (c) of the mobile activities has to focus on the needs to keep learners' attention and to keep content fresh in their mind" (Gu, 2011:4).

On the other hand, So states that "the most ubiquitous and stable technologies, namely Short Message Service (SMS) texting or cellular phones, have great potential in education" (2009:114). He also believes that SMS is the most reliable type of communication on mobile phones today (not to say the most popular), because if the phone is powered off or out of range, messages are stored in the network servers and

delivered to our phone as soon as it is again available. Information is therefore never lost or the communication channel is never totally cut off.

Although there are many projects based on mobile technology, the number of projects which focus on the use of SMS in the foreign language classroom is scarce. Thornton and Houser (2005) developed an innovative project which focused on providing vocabulary instructions by SMS. They e-mailed short mini-lessons to the students, three times a day during 15 weeks. The results indicated that SMS students learnt twice the amount of vocabulary compared to students using web-based materials and those using paper format. Levy and Kennedy (2005) conducted a similar study with Italian learners in Australia. Kiernan and Aizawa (2004) placed upper and lower level students into three groups: PC e-mail users, mobile phone users and face-to-face speaking users. They studied the time spent answering the exercises. In 2008, three academics at the University of Aberdeen developed a Flood Disaster simulation. This simulation used SMS text messaging, and the objectives were to help learners apply the theoretical ideas they had learnt during a practical situation (Cornelius, Marston and Gemmell, 2011).

Vavoula and Sharples (2009) believe that an in-depth study on the various m-learning scenarios should be carried out at three levels of evaluation: (1) the usability of the technology (micro level); (2) education/learning (meso level); and (3) organisation/practicability (macro level). Our study focuses on both the micro and the macro level, since we have investigated different types of exercises which follow the "set of designed principles for content, activity and usability" designed by Gu et al. (2011), as well as the organisation of time, students' preferences and other issues directly relating to the macro level of evaluation.

The research questions formulated were:

1. Is using SMS messages via mobile phone an effective tool in terms of motivation and engagement?
2. What type of exercises do subjects think are better to be sent via SMS in terms of engagement and usefulness for their learning purposes?
3. When do learners prefer receiving and sending the SMS outside of the class time?
4. Did students who participated in the project perform better than the control group?

Since the general aim of this study was to test the acceptability of using mobile phones in the classroom as a support tool, we thought that this project should not yet be linked to assessment. We coincide in this respect with Kennedy and Levy when they say: "We did not wish to link messages to assessment until we had established an approach that students were happy with." (2008:458).

### **3. Research Design**

#### *3.1. Participants and procedure*

This experimental study started in September 2009. As this was a preliminary study focusing on the viability of this methodology, the study was conducted with a small group of students. The group was made up of 13 first-year students taking the English Degree at the University Rovira i Virgili, in Tarragona, Spain. All thirteen students had registered for the face-to-face course "English Language-1". As the project involved spending some money on the exchange of SMS with the researcher, it was agreed that students would participate in the project on a voluntary basis.

### *3.2. Research Rationale and Pedagogical Design*

In a study conducted in 2007, Stockwell found out that most students preferred working with computers instead of mobile phones. He reached the conclusion that there is a need for a mobile interface "that requires little effort on the part of the learners to use, even when a higher cognitive burden is placed on them" (2007: 380). In our experimental study we have taken advantage of the way our subjects use their mobile phones on a regular basis, and thus we created SMS-based exercises. One of the aims of this project was to study the type of SMS exercises that are the most suitable to be sent to our students in terms of engagement and usefulness. For this reason, we designed different types of lessons and exercises that were sent to the students. The only characteristic that these exercises had in common was the fact that in part all of them solve the problem of interface complexity, the burden of the small screen as well as that of cost. So (2009:115) argues that SMS messages are a discrete type of message that can be delivered rapidly and that are very fast to read. This makes them readily available to learners anywhere, including trains or buses. The initial aim of our project was therefore to verify the viability of the technology for this specific purpose. In order to study the subjects' reactions towards this new use of technology it was considered that all the differences between students had to be eliminated or at least waived. This means that we had to create a methodology that could be supported by all kinds of mobile phones and which could be used by all kinds of users (i.e., from the most techno-skilled, to the least technology-oriented). For all these reasons we thought that as a starting point for our experimental study, a text-based message was the most appropriate option.

This research project lasted two academic years (Sept.2009- Sept.2011). During the first semester of the first year (Sept.2009-Jan.2010) we designed the activities that had to be sent. The various types of activities were meant to answer our second research question: what type of exercises do students think are better to be sent via SMS in terms of engagement and usefulness for their learning purposes? (See Appendix 1 with all the SMS texts sent). The SMS messages were sent throughout 15 weeks (the 2 nd semester of the academic year, i.e. from February to June 2010). Throughout this period the students were sent three exercises per week. This means that some exercises were sent in one single message, while others were divided into two or three messages due to their structure.

The subjects who received the messages were expected to answer the exercises wherever they happened to be. They were not expected to check dictionaries, grammar books or any reference source because all the information they needed to complete the exercises was included in the SMS.

The aim of study during the second year of our research project shifted to another objective. At that point of our study, we had an answer to our three first research questions, but we did not know if the students performed better when the exercises were given on paper or as an SMS.

For this purpose, during the first semester of the second year (Sept. 2010- Jan. 2011) we created SMS exercises that were based on the content that was taught in the subject that the students were taking, i.e. "English Language 1". Once the semester was over, we started sending the students three exercises (three SMSs) per week with the content that they had learnt in the first semester. This experiment expanded throughout the 15 weeks of the subject.

### *3.3. Data collection*

Since the research project was divided into two different periods, the collection of data was also differentiated.

The data from the first period was collected through a detailed test. This test was divided into two parts: in the first one we asked about different aspects of each of the

exercises that the students had received. Since one of the central points of this first part of the project was to establish which type of exercise was more suitable to be sent via SMS (from the students' point of view), we needed to know their opinions on each exercise in detail. The second part of the survey was a more general questionnaire on the methodology used in this project. (See Appendix 2)

In order to collect the data from the second period of the project, we administered a pre-test and a post-test to both the experimental group (students who participated in the research) and the control group (the students enrolled in the same course but who did not participate in the project). Both the pre and post-test were a combination of multiple choice questions and fill-in-the-blanks exercises. All these questions were based on the content covered by all the students during the first semester. The results of both the first year survey and second year tests, this is, both qualitative data and quantitative data, are presented in the following section.

#### 4. Results

This section analyses the results obtained and to what extent they answer our research questions. Our first research question tried to address the topic of motivation and engagement by the subjects when using this learning method. After a qualitative analysis of the subjects' feedback we concluded that most of the subjects found this methodology engaging. A detailed analysis of their feedback shows a wide range of reasons for their positive reaction:

1. The subjects did not mind (they actually enjoyed) receiving and answering messages immediately.
2. The subjects had the feeling that they were receiving private lessons with highly personalised material.
3. They enjoyed being able to answer from anywhere they happened to be.
4. They believed the exercises were not complex and so they could solve them in a short time.
5. They enjoyed that some of the exercises were based on real facts, and this increased their interest and curiosity about the next message.
6. All of them explained that they had the feeling they were living a special moment as subjects of "an experiment" with a new learning methodology.

Only one subject out of the 13 who participated in the experimental group stated that he did not find this methodology engaging at all. Being a computer user (on a daily basis), he could not see any justification in using a mobile phone, which coincides with the results obtained by Stockwell (2007).

The second research question addressed a more particular issue. We asked them to specify the type of exercises they thought were the most useful in terms of engagement and usefulness for their learning purposes. The following tables show the results of their answers:

Mini-lesson	Yes	No	So-so
1	100%		
2	100%		
3	100%		
4	50%	10%	40%
5	66%	22%	11%
6	37.5%	25%	37.5%
7	90%	10%	

8	50%	30%	20%
9	77.7%	22%	
10	77.7%		22.2%
11	77.7%		22.2%

Table 1: "Did you like the design of this activity?"

Mini-lesson	Yes	No	So-so
1	80%	20%	
2	80%	20%	
3	80%	20%	
4	100%		
5	100%		
6	37.5%	50%	12.5%
7	62.5%	25%	12.5%
8	11.1%	66.6%	22.2%
9	66.6%	22.2%	11.1%
10	75%	25%	
11	100%		

Table 2: "Do you think this is an appropriate exercise to be delivered via a mobile phone? Why?"

The data shows that the subjects in the study preferred the activities that could be answered immediately by just typing one or several words. They also preferred the activities for which they did not have to consult additional materials. The following reasons were produced to justify their negative answers:

- *The answer I had to write was too long;*
- *I couldn't answer immediately because I had to check the answers in a dictionary;*
- *I couldn't answer immediately because I needed a reference book and I was on the bus;*
- *The language level was too high;*
- *I had to write the answers on a paper because I couldn't remember all of them;*
- *Writing a whole definition is too long / too difficult.*

The third research question that we aimed to study was timing. We wanted to determine the appropriate timing for the activities to be sent. We knew that our students had a very busy timetable, and we were not sure about the best moment to send the messages. The timing preferences coincided, and data suggests that future messages should be sent between one and eight p.m. They all agreed that two or three messages a week was a good quantity, and they all preferred receiving them in the afternoon or in the evening. This explanation came as a surprise to us since we believed that the subjects would not like to be disturbed with academic matters once they left the faculty. Yet, we realised that they didn't really perceive these SMS exercises as an intrusive methodology, because they are accustomed to receiving SMS text messages on a daily basis to communicate with friends.

Our fourth research question addressed the issue of content performance. In this case, the data was collected through a pre-test and a post-test. These two tests were administered to both groups: the experimental group and control group. The following tables show the results obtained.

	<b>Pre-test results (44 Questions)</b>	<b>Post-test results (20 Questions)</b>
<b>experimental group</b>	30.3 (68.8%)	10.5 (52.5%)
<b>control group</b>	29.5 (67%)	7.95 (39.75%)

Table 3: Pre-test and post-test results.

From these results, we can safely conclude that the experimental group has outperformed the control group.

## 5. Discussion

Consequently, after analysing the data, we concluded that we coincide with So's theory (2009) on the necessity of employing trusted technologies such as SMS to connect with our subjects. From our subjects' feedback, we discovered that they did not perceive this experimental study as a big change in their lives, but only as an addition. That is, just some more SMS text messages per week to be added to the number of messages they already receive. This technology is completely natural to them, and this could be demonstrated by the fact that some subjects wrote in their evaluation questionnaires very personal comments, such as the following ones: *I didn't like the topic of this message so I didn't do it; I had to think a lot to do this exercise and for this reason I don't like it; I had just split up with my boyfriend and this topic was a bit difficult for me to answer; after all these SMS I still prefer face-to-face learning because I don't find this new methodology useful; I felt a bit sad and depressed, so I didn't feel like answering some of the exercises.*

The majority of our students enjoyed the experience. According to their feedback, they found this methodology useful and engaging. A very interesting point is that many of the students told us that they liked receiving the exercises, and they also liked receiving feedback on their answers the same day they had completed the activity. We believe that feedback via SMS is one of the issues that should be analysed in more detail in future studies because it has been one of the better evaluated items by the students.

According to the data obtained in the second year of the project, we strongly believe that SMS messaging is promising evidence that this methodology helps toward the retrieval of information and prior knowledge.

## 6. Conclusions

As a whole, we can conclude that the subjects found this experience interesting and appealing. They felt comfortable with it because they already knew how to use the technology and it did not mean any real change in their daily life except for the fact that they received some extra messages per week.

According to the data obtained, the subjects preferred receiving small chunks of information (contained in one SMS) which could be answered immediately. We can also conclude that the subjects preferred answering the exercises that required no additional support material. The possibility of answering at any time and in any place was regarded as a very positive feature.

Mobile phones are undoubtedly an important part of our students' lives, and so they do not see this methodology as intrusive. As our study proves, this methodology also has positive repercussions on the students' performance.

## 7. Implications and limitations

After a close observation of the subjects' use of mobile technology, we completely agree with So (2009: 122) in the fact that nowadays this methodology cannot be used in isolation or as a replacement of other traditional e-learning methods. Mobile technology

still has a long way to go before it becomes really effective: cheaper rates for Internet connection, larger screens, technology improvement, etc.

In the future, a study with a larger number of subjects needs to be carried out. But for this research study, the fact of having such a small group of subjects helped us overcome some of the difficulties that we came across and for which no reference studies were available. As flat rates become more popular and smart phones become more widespread, we hope that in the near future financial reasons will no longer prevent learners from being able to participate in this type of reinforcement methodology. Additionally, new software is currently being developed allowing users to access messaging services completely free of charge. As an example, we are now conducting a new research project for which a free SMS application is being used, so we plan to send increased media-rich messages in terms of content and visual/sound aids.

In conclusion, we believe that mobile technology is still in its early stages although it presents an enormous potential for education. We therefore hope that the findings in this study provide useful insights for other researchers interested in this type of technology and methodology.

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## Appendix 1

**SMS 1:** Hello. We know that nowadays young people always carry a mobile. Many studies suggest that you enjoy sending and receiving SMS. These studies also suggest that many people download games, and play with these games when they ARE BORED, waiting for the bus, in the train, etc. Nevertheless, some people find these games BORING, because they believe that the screen is too small. In some countries like Japan, people TOY WITH their mobile a lot more than we do. They watch TV with it and even receive video lessons from their universities! Maybe one day we will do the same... who knows.

BE BORING / BORED: Adjectives that end with -ed talk about our feelings. Adjectives that end with -ing talk about a person, a thing or a situation that causes one's feelings. TOY WITH: means to play with.

**SMS 2:** It's Saturday evening. You are watching a TV programme. Are you boring? or are you bored?

**SMS 3:** Which is the verb that rhymes with joy and means to play with?

**SMS 4:** Thanks for your SMS!! Feedback for the 1st lesson. If you are BORED, why don't you go to the cinema or TOY WITH your mobile phone? ;-) Well done!!

**SMS 5:** Two days ago I was talking to a friend of mine. She was rather angry because she had received a letter from the gas company which began "Dear friend...". The fact is that she knows nobody at the gas company. I told her she was being too SENSITIVE because the letters are printed automatically and normally respond to a model created by a computer programme. On hearing this, I noticed there were tears in her eyes. She said her eyes were extremely SENSITIVE to the smoke of my cigarette. So I apologised again, but she wouldn't change her opinion about the letter. I told her that her reaction

was not too SENSIBLE because she was paying too much importance to something really trivial, which she finally admitted.

SENSITIVE: easily hurt or damaged, esp. emotionally, susceptible, receptive to sense impressions (cat: sensible, susceptible, ple de sensibilitat). SENSIBLE: rational, reasonable, indicative of good sense or reason (cat: prudent, raonable)

**SMS 6:** It's getting dark outside. Someone turns on the light unexpectedly. You shout with pain. Your eyes are SENSIBLE to the light or SENSITIVE to the light?

**SMS 7:** Be SENSIBLE /SENSITIVE, you can't do it all on your own!!

**SMS 8:** Thank you so much for your feedback!! Here you have the feedback: Our eyes are usually very SENSITIVE to the light. That's why we wear sunglasses in summer. Be SENSIBLE, you can't do it all on your own!!

**SMS 9:** Hi. Do you know anything about Mary Shelley? You are right! Yes. She's the author of "Frankenstein", a TERRIFIC novel you should read immediately if you haven't yet. And please don't say you don't like HORROR stories. In "Frankenstein" there is little horror but a lot of action, suspense, love, tenderness, suffering, hate, revenge. All things considered, there is very little TERROR and a great deal of human emotions. In any case, the things that scared nineteenth-century people are not exactly the same we are scared of nowadays. So next time they tell you about a terrific novel, make sure you don't get confused.

- Remember: The weather in Madeira was terrific (superb)
- "Frankenstein" is a terrific novel (excellent, great)
- Frankenstein is a horror story (it causes fear)
- The creature in "Frankenstein" looks horrible (ugly, deformed)

**SMS 10:** We wanted to go to Jamaica, but the weather forecast for next week predicts a HORRIBLE tropical storm or a TERRIFIC tropical storm?

**SMS 11:** I've been having nightmares for three days now. It's HORRIBLE (or TERRIFIC?). I usually wake up after being attacked by a TERRIFIC (or HORRIBLE?) monster.

**SMS 12:** There was a HORRIBLE storm in Jamaica while I was there on holidays. Since then I have HORRIBLE nightmares in which a HORRIBLE monster attacks me.

**SMS 13:** Have you seen today's La Vanguardia? /10/03/10) On the cover we can read: "No one assumes the chaos" which means that no one A) takes up B) takes off C) takes in responsibility.

**SMS 14:** Ugh! This one was a bit more difficult, wasn't it? The right answer is A = take up responsibility (to be free from guilt). [take off = take flight -a plane-, take in = absorb information]

**SMS 15:** Today, at about 11, it has started snowing in Tarragona! Have you seen it? I've been told that it was snowing in many other places. I love it when it's snowing. There's so much silence, so much quietness... but it can be really dangerous if you suddenly see a large mass of snow and ice sliding swiftly down the mountain side... I forgot the name!! How do you call this phenomenon? a \_ \_ \_ \_ \_ e

**SMS 16:** AVALANCHE

**SMS 17:** Hi. I love the north east coast. The weather is lovely both in winter and summer and there are tourists all year round. Actually, near my hometown there is a summer RESORT where thousands of people from various nationalities spend one of two weeks every year. I guess the Mediterranean weather is a strong motivation. When

they've had enough rain, fog, cold and wind, and they cannot afford going to a tropical island, they RESORT to our country, which is close, friendly and well-communicated with the rest of Europe. However, every year more and more tourists visit our winter RESORTS up in the Pyrenees. If there is not much snow, many winter stations RESORT to artificial snow, though only as a last RESORT because there's nothing like a white weekend in a fancy skiing RESORT.

- Remember: Resort (NOUN): a place frequented by people for relaxation or recreation
- Resort to (VERB): turn to someone or something for help or protection

**SMS 18:** Find a synonym for the words RESORT: When tourists have had enough rain, they RESORT (1) to our country. However, every year many winter stations RESORT (2) to artificial snow.

**SMS 19:** Find a synonym for the words "resort": Words are rich and powerful enough to sort out differences. We should never RESORT (3) to violence. Actually, it's much better if we burn our negative energy in a winter RESORT (4)!

**SMS 20:** When the tourists have had enough rain, they FLY TO / TRAVEL TO (1) our country. Under many days of bad weather, some people FALL BACK ON / UTILISE (3) violence. However, every year many WINTER STATIONS (4) HAVE TO USE [with urgent necessity] (2) artificial snow.

**SMS 21:** If you score, you have a... GOOOOOAL!!!!!!

Talking about football vocabulary, do you know the meaning of referee? A referee is the person who makes sure the players follow the rules. Normally he wears a black shirt and shorts, and has a whistle. The goalkeeper is the one who makes the quick decisions as to when to leave the goal in order to prevent an attacking player from reaching a pass or cross. The DECISION has to BE TAKEN / MADE or you can also REACH or COME TO A DECISION. In football, a decision made by a referee is also called 'the call'.

**SMS 22:** Which word had a spelling mistake in yesterday's lesson? After a foul has been committed in the penalty area, the referee awards a penalty by blowing his ----- . He has to solve problems, quickly select the best alternative; this means quick ----- - making.

**SMS 23:** Who's the only one who has a whistle in a football match? When he ----- a penalty he blows his whistle.

**SMS 24:** The REFEREE always blows his WHISTLE (he's the only one who's got one) when he CALLS a penalty. He has to be good at DECISION-MAKING skills for the football match to be enjoyable.

**SMS 25:** One of the most important Spanish celebrations is HOLY WEEK. The Holy week is the RE-ENACTMENT of the Passion of Jesus Christ, and some cities and towns in Spain assume an air of solemn respect for what are the most important dates in the religious calendar. It is really spectacular to see hundreds of BEARERS belonging to different BROTHERHOODS carrying the FLOATS which support the IMAGES of Jesus and the Virgin Mary, while the EERIE sounds of the traditional DIRGES break the silence of the night. The image of the hundreds of feet DRAGGING on the floor and the smell of SCENT that comes from the candles drive you to a different world, a different setting... of sadness? of joy?

**SMS 26:** Find a synonym for the following words. 1. Religious societies. 2. Mysterious and frightening

**SMS 27:** Define the following words: 1. Dirge 2. Bearer

**SMS 28:** Read the following paragraph and write the words that are missing.

As you all know, next Friday we (1) St. Jordi. It's a very traditional holiday in which all Catalan people take over the streets to buy books and roses in (2) prepared for this purpose. The ritual consists of going for a walk and buying a rose and a book to your beloved. Unfortunately it is not a (3) holiday, though it is the only national festival celebrated on a working day. The most popular legend about St. Jordi tells that there was a dragon in Montblanc which (4) people. In order to pacify it, a person had to be chosen as a (5) to the monster. One day, the king's daughter was chosen, and she would have died in the beast's claws if it (6) not been for a handsome knight who killed the dragon. A (7) of roses sprang from the stain of its blood. Have a nice day!!

**SMS 29:** 1. celebrate, 2. stalls, 3. public, 4. attacked, 5. sacrifice, 6. had, 7. bunch

**SMS 30:** Entertaining, amusing, fun or funny? 1. The film is... (=entertaining). Don't miss it. 2. Jane is a very... (=amusing) person. You'll never get bored with her. 3. I have a... stomach today (=upset). 4. If I had known this novel was so..., I would have read it immediately (=enjoyable)

**SMS 31:** 1. fun, 2. funny, 3. funny, 4. entertaining

**SMS 32:** I did not like the film Avatar. The PLOT / ARGUMENT is simply boring.

**SMS 33:** Plot

## Appendix 2 (1)

*Questions:*

- *Please, use as much space as you need to answer your questions*
- *These questions are general. Feel free to write as much as you wish and even about topics not reflected in the questions.*
- *Any information you can give us will be extremely useful for this project. Just keep in mind that this is the first experimental study in this field in our country and any information you can provide will be of great value.*

## Exercises 1, 2 & 3

- Did you like the structure *text + a little theoretical explanation*? If so, why? If you didn't like it, how would you have preferred it?
- Do you think this type of exercise is appropriate for mobile technology? Why?
- Did you like the structure: first *a text*, and then *two separate exercises*? Why? Would you have preferred another option?
- Did you wait to receive both exercises, or did you answer immediately after each message? Why?
- For this type of activity, which sort of exercise do you prefer, choosing between several options, or finding the right word on your own? Why?
- Any other comments

#### **Exercise 4**

1. In general, did you like this activity? Which part did you like the most/the least? Why?
2. Do you think this type of exercise is appropriate for mobile technology? Why?
3. Did you like the exercise to be based on a real event (which had happened on the same day)? Why?
4. Did you like receiving personalized feedback? Which do you prefer, feedback of the type "that's right!" or a little text with the right words used in context as in previous exercises? Why?
5. Any other comments

#### **Exercise 5**

1. In general, did you like this activity? Which part did you like the most/the least? Why?
2. Do you think this type of exercise is appropriate for mobile technology? Why?
3. Did you like having to choose among several options or do you prefer open-answer exercises (you provide the right answer)? Why?
4. Did you like the exercise to be based on a real event (which had happened on the same day)? Why?
5. Any other comments

#### **Exercise 6**

1. In general, did you like this activity? Which part did you like the most/the least? Why?
2. Do you think this type of exercise is appropriate for mobile technology? Why?
3. This time you were supposed to find synonyms. Did you like this type of exercise? Why/Why not?
4. Any other comments

#### **Exercise 7**

1. In general, did you like this activity? Which part did you like the most/the least? Why?
2. Do you think this type of exercise is appropriate for mobile technology? Why? Which problems did you have to face when you did the exercises?
3. This time you were supposed to fill in the blanks with a word, and also to correct a mistake. Did you like this type of exercise? Why/why not?
4. Any other comments

### **Exercise 8**

1. In general, did you like this activity? Which part did you like the most/the least? Why?
2. Do you think this type of exercise is appropriate for mobile technology? This time you had to define words and find synonyms. Which problems did you have to face when you did the exercises?
3. Did you like the exercise to be based on a real event/festivity (Holy Week)? Why?
4. Any other comments

### **Exercise 9**

1. In general, did you like this activity? Which part did you like the most/the least? Why?
2. Do you think this type of exercise is appropriate for mobile technology? This time you had to fill in the blanks. Which problems did you have to face when you did the exercises?
3. Did you like the exercise to be based on a real event/festivity (St. George's Day)? Why?
4. Any other comments.

### **Exercise 10**

1. In general, did you like this activity? Which part did you like the most/the least? Why?
2. Do you think this type of exercise is appropriate for mobile technology? Why?
3. This time you had to fill in the blanks, though you were given the words. Did you like this type of exercise? Why?
4. Any other comments.

### **Exercise 11**

1. In general, did you like this activity? Which part did you like the most/the least? Why?
2. Do you think this type of exercise is appropriate for mobile technology? Why?
3. Do you think such a short exercise, and with only one option is interesting at all or do you prefer exercises with more content?
4. Any other comments.

### **Finally...**

1. Do you think the activities we have designed are useful to learn vocabulary? In your opinion, which ones are more useful? Why?

2. According to your own experience, which applications do you think this System might have? In other words, what sort of activities would you like to do: new vocabulary, vocabulary revision, false friends, etc.
3. Considering these activities were designed for mobile technology, which ones did you prefer? Which ones were more difficult to carry out using your mobile? Why?
4. Did you like the feedback you received? Can you think of a better way to send feedback?
5. Which exercises did you prefer, those which were divided into several parts (lesson + activity) or those which you could answer immediately after receiving the SMS?
6. When you did not answer one SMS (check page 1 to see your performance), do you remember why you didn't reply?
  - It came in a bad moment.
  - I didn't like the type of exercise.
  - Too difficult to answer.
  - Content not particularly attractive.
  - In general I thought it was a waste of time.
7. Please specify make and model of your mobile phone.

Thank you very much!!

#### **Notes**

[1] This questionnaire was originally given to the students in Catalan language. It has been translated by the authors for the purpose of this article.

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