# Research paper

## Instant-messaging for improving literacy and communication skills in FLT: students' evaluation

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**Abstract**

The present work presents an example of using Computer-Mediated Communication (CMC) in Foreign Language Teaching (FLT) with the aim to increase students' hours of exposure to English as a Foreign Language (EFL). Since class time is sometimes limited, it is necessary to look for reinforcement tasks for students to properly develop literacy and communication skills. In addition, CMC is considered by scholars a new variety of language, with its own features and rules, one that students must master as well as other traditional language varieties. As secondary goals, this project intended to develop students' motivation, autonomy, linguistic awareness and cooperative learning. By using a Mobile Instant Messaging (MIM) application, *Remind*, students were encouraged to communicate in groups and, thereby, supplement hours of practicing the foreign language outside the classroom, without limitation of time and space. Students evaluated the task by means of an online questionnaire and results proved to be positive, showing that they enjoyed the activity and considered it useful and effective. Moreover, they realised the importance of cooperative learning, of responsibility and of being aware of their own learning process. Likewise, the real and authentic purpose of communication enhanced motivation among students.

**Keywords:** Computer-Mediated Communication (CMC), Foreign Language Teaching (FLT), blended learning, cooperative learning, motivation.

### 1. Introduction

Technology develops by leaps and bounds, reshaping society and pushing it to adapt to constant changes. This remodelling also affects education, and a clear example is the inclusion of Information and Communication Technology (ICT) in teaching programmes around the world. Currently, new generations born within the technological era unconsciously integrate ICT in their daily lives without any effort; that is why they are called 'digital natives', as opposed to 'digital immigrants' (Prensky, 2001), the latter are mainly adults who need to learn to use and accommodate to technological devices. That is the reason why we, as teachers, must take advantage of ICT, considering that computers and smartphones, among others, are usual elements in students' lives and are motivating for them.

As communication is an essential part of ICT, its direct relation with learning languages is obvious. There is a need for improving productive and receptive skills in foreign language learning (FLL) and technology may be of great help. Students can use internet resources to watch videos in other languages, read foreign newspapers or talk to people from other countries. These practices are motivating not only because they involve using technology, but also because they have a real purpose and learning becomes meaningful. Following Guilloteaux and Dörnyei (2008, p. 58), the teacher must make "use of stimulating, enjoyable, and relevant tasks" and promote "learner autonomy".

Therefore, for students, technology may mean an increase in motivation and a change in their view about learning, as they can do it unconsciously or, at least, in an informal situation, which gets them away from the strictness of the classroom. In addition, for teachers, one of the main advantages is overcoming the lack of time in regular classes, which sometimes is not enough to teach, especially a foreign language (FL) that must be practiced beyond the classroom to achieve a suitable level.

Computer-Mediated Communication (CMC) can help the FL teacher as a way to reinforce students' productive and receptive skills. Using asynchronous (email, texting) as well as synchronous interaction (chats), the students may benefit from technology and improve their communicative competence in the FL. Indeed, they must also learn how to communicate using what some scholars consider a new variety of language that has become widespread and therefore necessary: a hybrid between spoken and written language that has emerged on the internet. Since CMC, such as instant messaging, is a kind of hybrid between oral and written language –a 'written speech' (Georgakopoulou, 2011, p. 96) or 'Netspeak' (Crystal, 2006, p. 17) involving multi-tasking (Baron, 2008)–, the subjects' discourse is spontaneous and sudden as it is normally in speech, but also allows for planning ahead as in written language. Yet, the language used in this medium is not transient and it contributes to the individual's 'techno-linguistic biography' (Barton and Lee, 2013, p. 18), which individuals may well be aware of. That is why CMC can be a complementary resource for FL teachers.

This paper presents an example of using CMC in the FL class in order to increase students' hours of exposure to the FL. Students were B1 users of English at Universidad Autónoma de Madrid and they were encouraged to employ a Mobile Instant Messaging (MIM) application, *Remind*, to communicate in groups and, thus, to keep on practicing the language outside the classroom. After the experience, they were asked to evaluate the task.

## 2. Theoretical framework

Social changes have meant a modification in the way teachers and students understand education, which has led to a development of a myriad of new approaches to teaching and learning in the last decades. This is especially evident regarding FL teaching, as communication between people worldwide is a frequent practice and governments and international organisations, such as the Council of Europe (2001), promote the learning and teaching of more than one language, and particularly English as a lingua franca. Thus, new teaching methods entail also new activities and resources, among which ICT and CMC are included.

### *2.1. CMC, a new variety of language*

CMC is a new variety of discourse between spoken and written language (Georgakopoulou, 2011) that emerged from the widespread use of the internet and the current globalized communications. In recent decades, it has attracted the attention of researchers from different areas of knowledge, Linguistics being one of the most prolific research domains.

A well-known expert on the topic is Susan Herring. She has devoted a great deal of her research to the analysis of language on the internet (2008, 2010, 2011 and 2012, among others). There are two main ideas in her research: the characterization of CMC as conversation, that is, a kind of "written speech" (Herring, 2008, p. 2); and the specific features of this new variety of language.

Regarding the first one, though controversial, most scholars agree on conceiving CMC as a hybrid between spoken and written discourse. The main disagreement comes from the idea that "conversation was, by definition, spoken and heard" (Herring, 2010, p. 12). However, when we talk about CMC, we unconsciously use a terminology typical of oral discourse, as 'He told me', 'Listen', 'Talk to you later' instead of 'He wrote me', 'Read' or 'Write to you later'. In Herring's (2010, p. 4) words, conversation can be understood as "any exchange of messages between two or more participants, where the messages that follow bear at least minimal relevance to those that preceded or are otherwise intended as responses". Therefore, the oral component is not essential according to this conception of conversation.

There are two main types of exchanges on the internet: asynchronous and synchronous. From an educational point of view, the former (emails, text messaging) "supports work relations among learners and with teachers, even when participants cannot be online at the same time" (Hrastinski, 2008, p. 52). Asynchronous exchanges allow for editing the text, as in traditional written discourse, since the writer has more time to reflect on the message. Synchronous communication (chats, videoconferencing), on the other hand, takes place in real time, acquiring features of face-to-face (F2F) communication, even when the channel is written, as in chats, where messages are "composed and sent on the fly, like turns in spoken conversation" (Herring, 2010, p. 13), being informal and context-dependent. The main difference with F2F interactions is that turn adjacency is disrupted and overlapping is common due to the lack of real presence of the speakers, and the possibility that all of them are writing at the same time.

The second research strand on language on the internet is related to the specific linguistic features of it, known as e-grammar (Herring, 2012). For instance, Bieswanger (2013, p. 464) mentions four main categories of micro-linguistic features in CMC: emoticons, non-standard spelling and creative use of writing systems, abbreviation and non-standard punctuation. Before Bieswanger, Crystal (2001) also characterized internet language as a variety of language, which he called 'Netspeak', which includes as distinctive elements the use of abbreviations, emoticons and a special typography.

Herring (2012) conducted a thorough analysis of this language variety, going from typography to syntax. She established a number of typographic features, such as the use of numbers instead of letters, special characters (for example @ or #), nonstandard capitalization, repeated punctuation to emphasize (!!!) or emoticons. She also mentioned "loosened orthographic norms", which include abbreviations, spelling that imitates pronunciation, prosody or paralinguistic phenomena. Regarding morphology, there are especial processes of word formation, acronyms, semantic shifts and using parts of speech with a different function (e.g. a noun replacing a verb). Finally, from a syntactic point of view, the language of the internet is characterized by being particularly telegraphic and fragmented.

Our aim here is not to analyse the variety of discourse generated on the internet, but to understand its features in as far as it is essential for students to learn this linguistic register, not only as an additional textual genre, but also as a useful tool to communicate with others.

### *2.2. CMC in FL teaching and learning*

Diverse educational pillars support the basis of this teaching proposal: constructivism, cooperative learning, student-centredness, informal learning, blended learning, and project-based learning. All these new approaches to teaching can be merged developing a very simple task. We will see how they lead the present work.

First of all, integration of technology in the teaching of English as a foreign language (EFL) "demonstrates the shift in educational paradigms from a behavioural to a constructivist learning approach" (Wang, 2005, p. 40). Nearly 50 years ago, Piaget (1973) suggested that learners construct knowledge from their own experiences, understanding the learning process as an active, meaningful medium of assembling knowledge, the learner being a central agent. Therefore, using CMC in EFL teaching follows, in Wang (2005, 40-41) words, constructivist assumptions: "learning is an active process", "problem solving is the focus", and "learning is a collaborative process". When students are enrolled in CMC, particularly a chat —as this is the task described in the present work—, they are actively participating and developing the activity, building knowledge. Also, they are negotiating meaning in interaction and, therefore, solving problems as they arise (clarifying meaning, asking for further information to properly understand the message, etc.). Moreover, as they talk and negotiate they are learning in a collaborative manner. Beyond Piaget's cognitive or individual constructivism, we find Vygotsky's social constructivism, which "is a highly effective method of teaching that all students can benefit from, since collaboration and social interaction are incorporated" (Powell and Kalina, 2009, p. 243). Following Vygotsky (1962), social interaction plays an essential role in learning and CMC tasks may, therefore, be a useful activity for building knowledge. Gómez and Shafirova (2016), after analysing a

collaborative learning task using MIM, concluded that cooperation is a fundamental element in the learning process, as acquiring knowledge is never an isolated undertaking, but a social enterprise.

As mentioned before, learners are the central agents in their own learning process. Newmaster, Lacroix and Roosenboom (2006, p. 105) consider that learner-centredness involves authentic learning, that is, "limited to environments in which the student is intrinsically motivated to solve a problem or tackle a project". Using CMC to communicate with peers in real situations and negotiating meaning is a clear example of learner-centred authentic learning. Moreover, the teacher is just an observer, which makes him/her take a step back and move away from the traditional teacher-centred approach to teaching (Wang, 2005).

Regarding informal learning, Bekleyen and Yilmaz's (2012) research on the effects of a Computer Supported Collaborative Learning (CSCL) activity on a group of students from Dicle University (Turkey) is interesting. They concluded that students displayed "positive attitudes towards the autonomous learning approach although they came from traditional and authoritative backgrounds" (Bekleyen and Yilmaz, 2012, p. 424). Informal learning or learning beyond the classroom allows the students not only to spend more time in contact with the area of knowledge, but also promotes autonomy and responsibility in their learning process. Also, according to Benson (2011, p. 12), "Locus of control shifts back to learners when they gain confidence in their ability to learn in more naturalistic, informal ways".

This latter idea is related to blended learning, as the students are asked to work on the subject (the English language in this case) not only in F2F traditional lessons, but also in virtual environments (Slomanson, 2014). Graham (2006, p. 18) establishes three main advantages of blended learning: flexibility (as students decide about the time and place), participation (increased due to lack of constraints of time and place), and depth of reflection (students can take their time to think and muse before participating). Additionally, as mentioned before, the exposure time to the FL increases, as the classroom is not the only moment when students are practicing the language.

Another methodology that guides this proposal is project-based learning, defined as "a model that organizes learning around projects" (Thomas, 2000, p. 1). At first sight, CMC using MIM cannot be considered a project in itself, as, if we strictly follow the recommendations of certain scholars, essential guidelines for project-based learning include "assign students a design problem", "structure project milestones to facilitate knowledge construction", or "have students articulate their learning through the development of learning artefacts" (Koh, Herring and Hew, 2010, p. 290). If instructions for students, as we will see in the section devoted to the methodology, are basically to maintain a spontaneous conversation in EFL about any topic they are interested in, as in real conversations, we cannot talk about a design problem, concrete milestones or developing learning artefacts. However, Thomas (2000, p. 1) adds some other features of project-based learning, such as tasks "based on challenging questions or problems", "problem-solving", "decision making", "cooperative learning", giving "students the opportunity to work relatively autonomously over extended periods of time" in "authentic content", the teacher being a facilitator and not a director. All these requirements are met by MIM applied to EFL learning, as will be explained in more detail below.

Finally, some benefits of CMC over F2F communication are the opportunity to participate equally, a higher motivation and "the social construction of knowledge" (Warner, 2004, p. 69). Sotillo (2006) also mentions that negotiation of meaning in a real conversational situation improves the learning of FL, makes the learners be more aware of linguistic structures and supplement their linguistic competence outside the traditional classroom. In addition, in order to communicate in the current technological society, EFL learners will need to master this emergent variety of language as well as traditional ones.

## 3. Methodology

This section presents in detail the methodology and exact procedure by means of which a group of students used CMC, particularly a MIM application, to increase hours of exposure to the FL and improve their literacy and communication skills. After defining the sample and the context, the use of this MIM application will be described, together with the guidelines given to students to carry out the task. Finally, the process of data collection will be explained.

### *3.1. Sample and context*

The project was carried out by a group of 49 students studying third academic year of Primary Education at university. They have a compulsory subject called *English II*, where they are supposed to prove a B1-intermediate level with the aim of achieving a B2 by the end of the academic year (though actually the group language level was heterogeneous). Most of them were born in 1996, and therefore the mean age was 21 years old. They had three and a half hours of class per week, which is insufficient to increase their level if they do not practice outside the classroom environment. That is the reason why they were asked to use a MIM application to keep in daily contact with the English language.

### *3.2. Procedure*

*Remind* (https://www.remind.com) is a free instant-messaging software especially developed for academic teacher-student interaction, as it allows for safe private exchanges (phone numbers are hidden and participants can log in using their institutional email address) and provides researchers with an immediate transcript of user exchanges. It can be accessed from a computer, a tablet or a smartphone, which allows for flexibility regarding time and place of use.

First, the teacher creates an account like in any other MIM application such as *WhatsApp*, *Telegram*, etc. Being the only administrator, he/she can create as many groups (virtual classrooms) as necessary. The number of participants per group is limited to 10, including the teacher. Ten groups/classes were created, called *English1* to *English 10.* Every time a group is created, *Remind* generates a code by which the participant can log in. Students were allowed to choose the group they wanted to belong to (Table 1). Groups had an average of 5 students (some of them were made up of 4 students, some others of 6) and the teacher was included in all of them. They were free to choose their group so that they felt more at ease and communication would improve.

Table 1. Example of procedure to create *Remind* groups.

| CLASS | CODE | MEMBERS |
|---|---|---|
| English1 | xxxxxx@mail.remind.com | |

After downloading the phone application and using the code to log in, they could start interacting. They were asked to write at least four times a week during the academic year about any topic they found interesting, in order to ensure they would complete the task. Moreover, they were informed this activity would be a part of their final evaluation; in other words, participation was necessary to pass. Figure 1 shows an example of a virtual classroom.

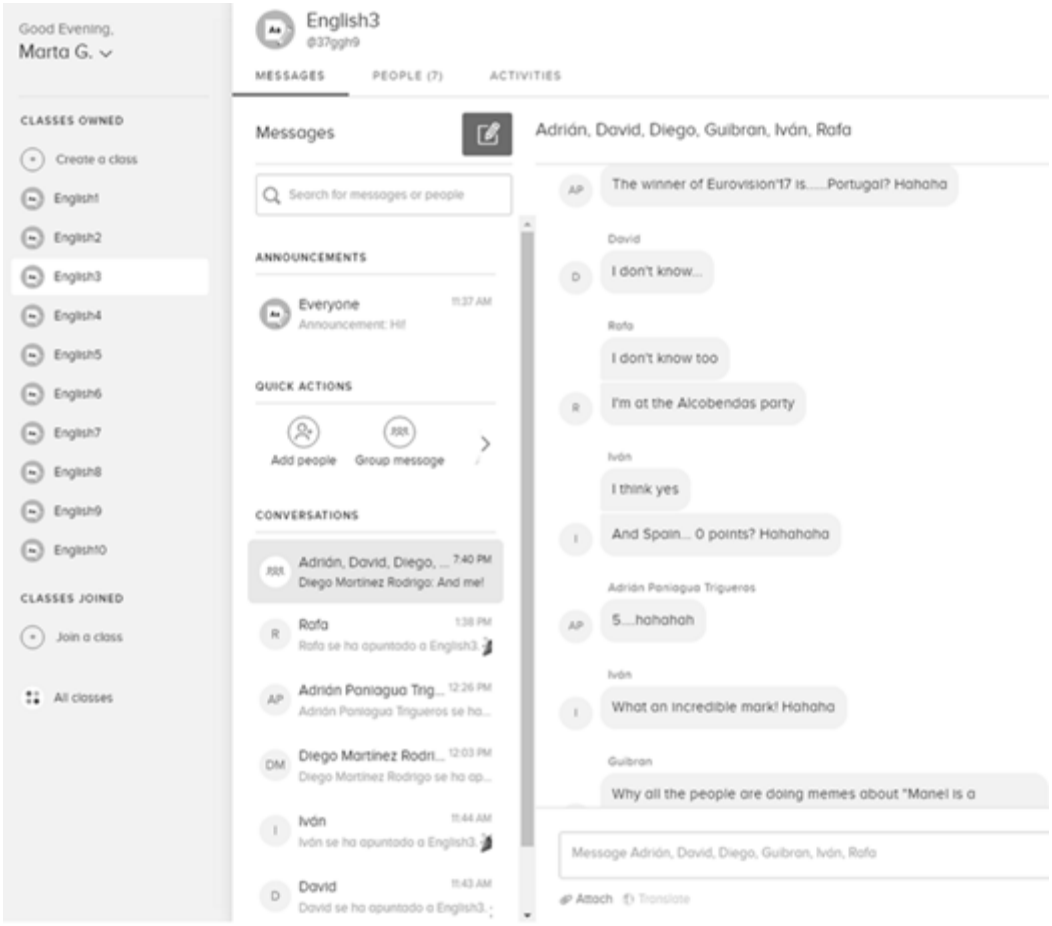


Figure 1. Sample chat.

### *3.3. Data collection*

Once the task was finished, the application allows the administrator to send the chat history by email. The result was a corpus made up of 10 files (8.49 MB) and a total of 78,011 words. Table 2 presents the number of words per group, with a mean of more than 7,000 words.

Table 2. Corpus data.

| Class | Words |
|---|---|
| English1 | 3,095 |
| English2 | 8,296 |
| English3 | 7,827 |
| English4 | 5,409 |
| English5 | 6,820 |
| English6 | 3,438 |
| English7 | 3,473 |
| English8 | 16,825 |
| English9 | 7,803 |
| English10 | 15,025 |
| **Total** | **78,011** |

As can be seen, not all groups were equally productive. Those with the lowest number of words (English 1, 6 and 7) limited their participation to the minimum requirement (using the chat four times a week). However, the rest of the groups were motivated and chatted more than what was demanded, which means that they were motivated.

When the academic year was finished, in order not to put pressure on the students so they could feel free to give their honest opinion, they answered an online questionnaire about the activity. The questionnaire was made up of 8 Likert-scale questions and a final open question. In the next section, results will be commented on.

## 4. Results and discussion

### *4.1. Likert-scale questions*

The questionnaire was administered online, obtaining just 39 answers (out of the 49 students who participated in the activity). Figure 2 displays the results of the 8 Likert-scale questions, where they had to choose from 1 = nothing/bad to 6 = a lot/very good.

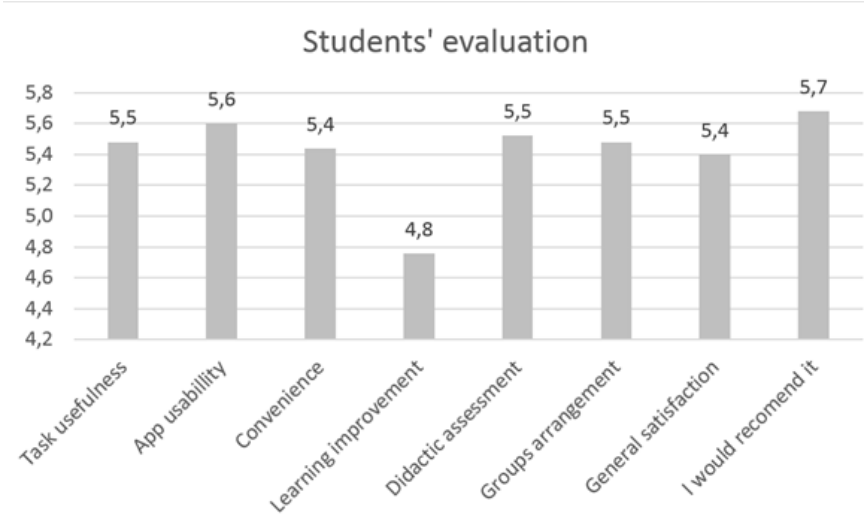


Figure 2. Questionnaire results.

Observing the results, it is noteworthy how the students positively value the application's usability. Taking into account that they are digital natives (Prensky, 2001), this is not surprising. Regarding learning improvement, it seems contradictory that this variable presents the lowest punctuation, as they consider the didactic benefit of the task to be certain and they think it is a useful undertaking. Finally, they mostly would recommend using MIM to improve their literacy and communication skills.

### *4.2. Open question*

The open question, where the students can give their opinions, is what provides the most valuable information in this study. We list and analyse some of these below in order to know how students evaluated this CMC task.

In example (1) we observe how the student becomes aware of the importance of cooperative learning and project-based learning. They must work *together* to achieve an aim: communication in the FL.

> (1) *I think it is such a great way to* learn from others *while having fun. However, this methodology* depends mostly on the will of the students *to learn from others.*

Thereby, the constructivism assumptions pointed out by Wang (2005) are met here, using a chat to actively learn and build knowledge collaboratively. Likewise, the activity accounts for some features of project-based learning proposed by Thomas (2000): challenging problems, problem-solving, decision-making, cooperative learning, autonomous work, and authentic context. Students must direct the conversation, solve communication problems and cooperate without explicit guidance by the teacher.

Examples (2) and (3) show how FL can be practiced beyond the academic institution, in virtual environments (Slomanson, 2014), increasing flexibility, participation and depth of reflection (Graham, 2006).

> (2) *Very useful to keep on practising English every day.*
>
> (3) *I have never talked in English so long in a conversation.*

Again, through blended-learning and informal learning students' autonomy is boosted, they become responsible for their own learning process and contact with the FL is enhanced.

Students also become aware of the need for feedback to overcome their mistakes. (3) and (4) are examples of this.

> (4) *It's a very good idea, but a disadvantage is that mistakes are not corrected.*
>
> (5) *Teacher's support helped me correct my grammar and vocabulary mistakes.*

There seems to be a contradiction between both examples due to the non-continuous participation by the teacher. She wanted to keep a distance, acting as an observer (Benson, 2011), and took part just in those cases when mistakes were worth correcting. In addition, on many occasions there was peer correction though, unfortunately, some students do not feel totally sure when it is a peer who corrects a mistake. Many times, however doubts were brought to class, which gave rise to unexpected discussions and facilitated the explanation of non-planned issues. In a sense, these situations conformed a sort of flipped classroom context, as 'research' by students was previously carried out and "classroom time is dedicated to learning activities that require students to engage concepts at a higher level in a group setting and with an instructor at hand to answer questions, give feedback, and prompt reexamination of key ideas" (Baepler, Walker and Driessen, 2014, p. 229).

As mentioned in the section devoted to the theoretical framework, learning should be meaningful and have a real purpose. That way, it makes sense for students, and is what motivates them.

> (6) *It's a good learning method, in which you are obliged to work on your English as you need to look up words to express yourself and to understand your classmates.*

In (6), a student realised that they needed or felt obliged to make an effort to get themselves understood, which, otherwise (in non-real situations), they would not probably do. In addition, they had to use the dictionary to increase vocabulary.

> (7) *I have learned how difficult is trying to explain something with your words when your classmates don't understand what you are meaning.*

We can see a similar example in (7), where negotiating meaning is a must, like in real conversations. Again, a real purpose makes learning meaningful. Also, as Sotillo (2006) claims, learners develop linguistic awareness, since they need to analyse sentence structures to interpret the message, use the correct words, etc.

This last idea is linked to motivation, as expressed in examples (8) and (9): as they feel free to talk about what is interesting for them, the experience changes into funny instead of boring and compulsory, and learning becomes more motivating. According to a study carried out by Waninge, De Bot and Dörnyei, (2014, p. 711), four variables that affect motivation in students are *enjoyment*, *confidence in their language learning ability*, *anxiety* and *attitudes toward the teacher*. By using MIM to practice communication in the FL, students enjoy themselves (as proved by their own comments); they gain confidence in their language skills, as they manage to make themselves understood; their level of anxiety decreases, as they are not exposed in front of a whole class, but they can be at home or any other place where they feel safe and relaxed; and the teacher, as mere observer, does not constitute a threat.

> (8) *It's a funny and interactive way of working English writing and you are free to talk about what interests you.*
>
> (9) *I think it's an interesting idea for students at university and to promote English learning.*

As a curious issue, example (10) can be a possible explanation for the contradictory fact that the item 'learning improvement' was not highly valued.

> (10) *To the question on 'learning improvement' my punctuation is not high as I don't think the aim of this task is learning, but practising (what is cool for writings).*

Students may link the activity to writing, instead of viewing it as a complete means of communication. They are not just developing their writing skills, but also their reading and interaction. What they are actually learning is what Herring (2012) called e-grammar (or the 'Netspeak' of Crystal, 2001). They use emoticons, abbreviations, special characters, repeated question marks and exclamation marks to emphasize their discourse, imitating pronunciation with, for instances, the use of capitals to indicate shouting, etc. Though the aim of this work is not a linguistic analysis of chat discourse, this idea opens a future research line.

Going back to the topic of digital natives (Prensky, 2001), opinion (11) proves that they feel comfortable using technology. In this way, teachers can take advantage of devices and gadgets students like and, somehow, they relate to leisure instead of to studying time.

> (11) *I think that with this activity the students' motivation increases, as the learning of English is done using a way of communication with which students are currently familiarized.*

Finally, fragments (12) and (13) show that students consider this activity innovative and a different way of evaluation.

> (12) *I think it's been a really innovative task. I had never done something like that and it was actually good.*
>
> (13) *I love the idea and I really appreciate a different evaluation strategy.*

To summarise, it can be concluded that the students participating in this MIM activity to improve literacy and communication skills in EFL evaluated the task as positive, obtaining a mean punctuation of 5,4 out of 6. Students showed they had become aware of the importance of cooperative learning and they had to solve communication problems by negotiating meaning and looking up words in a dictionary. They also reflected on English language structures, developing linguistic awareness. MIM increases flexibility regarding time and space, participation and autonomy. Moreover, motivation was achieved mainly due to fact that they enjoy ICT activities and to the authentic purpose of communication. Among the seven components of FL motivation which Csizér and Dörnyei (2005, p. 21) outlined, this task contributes to developing at least two of them: *instrumentality*, as students became more mindful of the "pragmatic benefits of L2 proficiency"; and *linguistic self-confidence*, as the specific communication channel made them feel anxiety-free, as opposed to F2F communication.

## 5. Conclusions

This paper presents an alternative way to improve literacy and communication skills in FL teaching (FLT). By means of CMC, particularly a MIM application, learners can communicate in the FL beyond the classroom, increasing the hours of exposure to the target language. Moreover, this activity gathers some of the current approaches and principles in FLT: cooperative learning, blended learning, student-centredness or project-based learning.

Using a chat to improve students' skills in FL fosters autonomy, making students responsible and aware of their own learning process. In addition, motivation enhances due to two main elements: a real purpose, as communication is meaningful; and the use of ICT, which for digital natives is an essential part of their lives, and using devices such as computers or smartphones is an incentive for them. Likewise, informal learning (outside the academic institution) encourages students to work and, in the particular activity presented here, the possibility to choose the conversational topic made them feel even more interested. Another important advantage is that the task can be carried out anytime and anywhere. This flexibility facilitates learning as well as supplementing classroom hours. As results from the questionnaire illustrate, students' evaluation of the MIM activity is positive.

The main shortcoming of this activity is that it cannot be used to teach pronunciation, since "text-based Internet language is lacking in sound, and therefore, questions of phonetics and phonology, which are central to linguistics, cannot be addressed directly" (Herring, 2008, p. 4). Therefore, a possible alternative would be using video chat activities.

An interesting further research direction would be to focus on qualitative analysis of the corpus in order to identify mistakes by non-native speakers (NNS) of English and, thereby, improve teaching programmes. In addition, it would be relevant to compare NNS' e-grammar with Ns' in order to identify similarities and differences.

## References

Baepler, P., Walker, J.D. and Driessen, M. (2014). It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. *Computers & Education,* 78, 227-236.

Baron, N. (2008). *Always on: Language in an Online and Mobile World.* Oxford: Oxford University Press.

Barton, D. and Lee, C. (2013). *Language Online: Investigating Digital Texts and Practices.* London: Routledge.

Bekleyen, N. and Yilmaz, A. (2012). The impact of Computer-Assisted Language Learning on vocabulary teaching: JingTM and instant messaging. *Education Sciences,* 7(1), 419-425.

Benson, P. (2011). Language learning and teaching beyond the classroom: An introduction to the field. In P. Benson and H. Reinders (Eds.), *Beyond the Language Classroom* (pp. 7-16). London: Palgrave Macmillan.

Bieswanger, M. (2013). Micro-linguistic structural features of computer-mediated communication. In S. Herring, D. Stein, and T. Virtanen (Eds.), *Pragmatics of computer-mediated communication,* 9 (pp. 463-488). Berlin/Boston: Walter de Gruyter.

Council of Europe (2001). *Common European Framework of Reference for Languages: learning, teaching, assessment.* Cambridge: Cambridge University Press.

Crystal, D. (2001). *Language and the Internet.* Cambridge: Cambridge University Press.

Crystal, D. (2006). *Language and the Internet.* Cambridge: Cambridge University Press.

Csizér, K. & Dörnyei, Z. (2005). The internal structure of language learning motivation and its relationship with language choice and learning effort. *The Modern Language Journal,* 89(1), 19-36.

Georgakopoulou, A. (2011). Computer-mediated communication. In J. Östman and J. Verschueren (Eds.), *Pragmatics in Practice.* John Benjamins, pp. 93-110.

Goker, S.D. (2006). Impact of peer coaching on self-efficacy and instructional skills in TEFL teacher education. *System,* 34(2), 239–254.

Gómez, D.S. and Shafirova, L. (2016). Conversación en WhatsApp: aprendizaje y colaboración en lingua franca. *Bellaterra Journal of Teaching & Learning Language & Literature,* 9(4), 23-40.

Graham, C.R. (2006). Blended learning systems. In C.J. Bonk and C.R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 3-21). San Francisco: Pfeiffer Publishing.

Guilloteaux, M.J. and Dörnyei, Z. (2008). Motivating language learners: A classroom-oriented investigation of the effects of motivational strategies on student motivation. *TESOL Quarterly,* 42(1), 55-77.

Herring, S.C. (2008). Language and the Internet. *The International Encyclopedia of Communication.* DOI: 10.1002/9781405186407.

Herring, S.C. (2010). Computer-mediated conversation, Part I: Introduction and overview. *Language@Internet,* 7(2), 12-31.

Herring, S.C. (2011). Computer-mediated conversation, Part II: Introduction and overview. *Language@Internet,* 8(2), 12-24.

Herring, S.C. (2012). Grammar and electronic communication. In C. A. Chapelle (Ed.), *The encyclopedia of applied linguistics.* Retrieved from: https://onlinelibrary.wiley.com/doi/10.1002/9781405198431.wbeal0466.

Hrastinski, S. (2008). Asynchronous and synchronous e-learning. *Educause Quarterly,* 31(4), 51-55.

Koh, J.H.L., Herring, S.C. and Hew, K.F. (2010). Project-based learning and student knowledge construction during asynchronous online discussion. *Internet and Higher Education,* 13(4), 284-291

Newmaster, S., Lacroix, C.A. and Roosenboom, C.R. (2006). Authentic learning as a mechanism for learner centredness. *International Journal of Learning,* 13(6), 103-112.

Piaget, Jean. (1973). *To Understand is to Invent.* New York: Grossman.

Powell, K.C. and Kalina, C.J. (2009). Cognitive and social constructivism: Developing tools for an effective classroom. *Education,* 130(2), 241-250.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon,* 9(5), 1-4.

Rosen, D., Woelfel, J., Krikorian, D. and Barnett, G.A. (2003). Procedures for analyses of online communities. *Journal of Computer-Mediated Communication,* 8(4), 0-0.

Slomanson, W.R. (2014). Blended learning: A flipped classroom experiment. *Journal of Legal Education,* 64(1), 93-102.

Sotillo, S.M. (2006). Using Instant Messaging for Collaborative Learning: A case study. *Innovate: Journal of Online Education,* 2(3), Article 2.

Thomas, J.W. (2000). *A Review of Research on Project-Based Learning.* San Rafael, CA: Autodesk Foundation.

Vygotsky, L.S. (1962). *Thought and Language.* Cambridge, MA: MIT Press.

Wang, L. (2005). The advantages of using technology in Second Language Education. *T.H.E. Journal,* 32(10), 38-42.

Waninge, F., Dörnyei, Z. and De Bot, K. (2014). Motivational Dynamics in Language Learning: Change, Stability, and Context. *The Modern Language Journal,* 98(3), 704-723.

Warner, C.N. (2004). It's just a game, right? Types of play in foreign language CMC. *Language Learning & Technology,* 8(2), 69-87.