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EXPLORING THE BENEFITS OF ACMC FOR SPEAKING DEVELOPMENT

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ABSTRACT

Currently, language educators experience difficulties in facilitating oral practice effectively in the foreign language classroom. Regularly, they face introverted and passive learners who fail to embrace speaking opportunities (Poza, 2011), or simply do not find the time to promote speaking practice in the classroom (Meddings & Thornbury, 2009). In this light, many asynchronous computer mediated communication (ACMC) technologies have emerged to confront this situation. However, central research studies do not seem to acknowledge ACMC as viable in accommodating oral development but, rather, frequently attribute this merit to synchronous CMC (Levy & Stockwell, 2006; Kervin & Derewianka, 2011). By employing a mixed-methods approach, this small-scale case study examines, firstly, the extent to which ACMC speaking practices are suitable for language learners' speaking development. Secondly, and by extension, it investigates the salient characteristics of the ACMC tool myBrainshark, that makes it appropriate for fostering linguistic growth. The data is obtained from post-beginner Spanish language learners by means of an online questionnaire and an online structured stimulated recall. The findings show, on the one hand, that ACMC oral practices can be beneficial in developing speaking aspects in lower-proficiency language learners and, on the other hand, that myBrainshark has characteristics that can potentially promote linguistic development. Finally, this paper calls for experimental research on the improvement of oral competency in post-beginner and higher-proficiency learners.

INTRODUCTION

Speaking skills have a privileged status in the language-learning world (Egan, 1999). Both educators and language learners consider speaking a fundamental communicative skill in which development is often expected. However, evidence reveals that foreign language educators regularly experience difficulties in fostering speaking activities due to multiple reasons – some of which are beyond their control. For example, educators are often involved in classroom situations in which bystanders fail to embrace speaking opportunities (Poza, 2011). By bystanders, this article refers to introverted learners, inhibited learners, passive learners and learners frightened to speak (Wallace, 1999; Hata, 2003; Abuseileek, 2007). Additionally, there are times when speaking opportunities are non-existent because speaking practice is seen as the culmination of mastering vocabulary and grammar; therefore, by the time learners reach that stage, there is little time to cover this crucial linguistic skill (Meddings & Thornbury, 2009). As can be expected, this situation is gradually slowing down learners' development oral proficiency.

On a different note, technological advances in recent years demonstrate that the digital medium has become more and more popular in developing oral skills (see, for example, Abuseileek, 2007; Vinther, 2011; Jauregi *et al.,* 2012). In fact, one of the many fascinations of the 21st century is the arrival of computer-mediated communication (CMC). Several research studies support that CMC, in its synchronous manifestation, facilitates the acquisition of oral competence (Levy & Stockwell, 2006; Kervin & Derewianka, 2011; Jauregi *et al.,* 2012). Particularly, these studies support the value of interaction by means of *Voice over Internet Protocol* (VoIP) applications (e.g. *Skype*, *Tokbox*, *ooVoo*) and *Polycom* systems. These systems enable the transmission of voice (and video) communication via the Internet among learners (Kervin & Derewianka, 2011). Thus, today synchronous CMC (SCMC) appears to be the modality that facilitates speaking development in contrast to its counterpart, asynchronous CMC (ACMC), which is relegated to written practices such as sending e-mails or using online bulletin boards. This is consistent with studies encapsulating evaluative frameworks of technology that do not consider ACMC speaking practices (see Levy & Stockwell, 2006; Kervin & Derewianka, 2011). Nevertheless, the reality shows that, nowadays, SCMC-speaking practices do not exceed those of ACMC in number. Actually, emergent research in the field of CMC shows that a significant number of technology-based speaking activities take place asynchronically (see, for example, Huang & Hung, 2009; Sun, 2009;

Hung, 2011). In essence, these practices typically involve learners producing spoken output that is subsequently evaluated by the educator (e.g. podcasts, vodcasts, etc.). Currently, there is a wide range of services and tools that can accommodate ACMC speaking practices which, as I will argue in this paper, have the potential to significantly contribute to learners' levels of oral sophistication.

In view of the preceding, the present study seeks to shed light on, firstly, the suitability of ACMC speaking activities in developing speaking skills. In achieving this, this study will draw upon the cutting-edge tool *myBrainshark* because of its potential to successfully sustain ACMC oral practices. The findings aim to illustrate if ACMC is truly capable of enhancing oral competence and whether language educators should utilize these practices to offer additional speaking opportunities outside the classroom. Secondly, *myBrainshark* is examined in order to show which features make this online environment appropriate for language learning.

Thus, in this article I briefly describe the situation of CMC and speaking skills in present times with special focus on ACMC. I then explore the characteristics of electronic materials for language learning, drawing on Reinders and White's (2010) evaluative framework of CALL (Computer-assisted language learning) materials. Next, I present the participants of this study, the pedagogical design of the ACMC oral task (i.e. digital storytelling) undertaken with the tool *myBrainshark* and the methods of data collection employed. Following this, I outline the findings and conclusions for the investigation. Finally, I report the potential implications of the study for foreign language educators and its limitations.

CONTEXTUALIZATION

CMC and speaking skills today

Research on CMC for improving foreign language performance is abundant. Over the years, a general academic consensus has been reached on the potential of CMC to generate higher amounts of learner output and also positive attitudes towards learning the target language (Levy & Stockwell, 2006; Kervin & Derewianka, 2011) which, in turn, result in increased motivation and engagement (Jauregi *et al*., 2012). Interestingly, studies particularly focusing on how CMC can improve speaking skills, either synchronically or asynchronically, have

recently started to surface (see, for example, Abrams, 2003; Huang & Hung, 2009; Sun, 2009; and Zhang, 2012). Apparently, there are manifold possible reasons behind this reality. Indeed, the first evident reason is that technological developments, such as the Internet, have led a great deal of language educators to reconsider how communicative skills need to be addressed in the language classroom (Warschauer, 1996; Fotos & Browne, 2004). A second potential explanation for the increase in CMC research in speaking development would be the introduction of many technology tools in the foreign language-learning (FLL) world (e.g. *Skype, Audacity*, *EyeJot*, *Vocaroo*, *Voicethread* or *Voxopop*). These technologies are capable of accommodating oral language-learning tasks; it is, therefore, hardly surprising that educators have also begun to embrace ACMC and SCMC to relocate some of their common in-class speaking tasks outside the physical classroom.

ACMC and speaking skills

Spoken ACMC practices seem to be flourishing as a fair alternative to oral SCMC. This situation is reflected by the numerous empirical studies emerging within the field (see Volle, 2005; Huang & Hung, 2009; Sun, 2009; and Hung, 2011). Consistent with these studies, technology-based oral asynchronous activities usually consist of unidirectional spoken output. Brown (1994) categorizes oral output manifestations in language learning as follows:

- *Intensive*: performances configured to train grammatical or phonological aspects of language (e.g. minimal pairs)
- *Imitative*: repetition of patterns and structures
- *Responsive*: short replies to educators' or leaners' questions
- *Extensive*: prolonged monologues (e.g. short speeches, expression of ideas).

ACMC practices in either of its modalities are proving to be especially suitable for working on oral aspects, such as pronunciation, fluency, or intonation, outside the physical classroom. As a matter of fact, the use of ACMC for speaking-development purposes is producing generally satisfactory results, as key studies in the field disclose. By way of illustration, Sun (2009), in a study concerning voice blogs, found that ACMC enhanced oral proficiency, as well as aspects of self-presentation, social networking and information exchange. By the same token, Huang and Hung (2009), in their study on voice electronic portfolios, exposed that voice recording attracted learners' attention towards

weaker areas of speaking, and also reduced anxiety and provided new opportunities for oral practice. On the other hand, the findings for these studies also showed some drawbacks to ACMC oral practices. For instance, the absence of interaction and rehearsal opportunities disguised the real proficiency level of foreign language learners.

Distinctive features of electronic materials

Electronic materials share a great deal of elementary characteristics with traditional materials. Both can be authentic, pedagogic, commercialized and produced for a broad audience (Levy, 1997; Levy & Stockwell, 2006). By extension, both also help in the development of language acquisition and "are therefore subject to the same pedagogical affordances and constraints" (Reinders & White, 2010: 62). In stark contrast, there are also differences between electronic and non-electronic materials that make the latter unique and greater than those that "can be put between the covers of a textbook or on an audio or videotape" (Chapelle, 2010: 69). Mostly, these dissimilarities have initially been attributed to the inherent technical characteristics of the electronic medium, including storage capacity, sound, and video *inter alia* (Levy, 1997). As can be expected, over time the scope has broadened and more comprehensive feature-oriented descriptions of electronic materials have come to the fore. This fact can be illustrated, for example, by Reinders & White's (2010) work on ELT (*English Language Teaching*) material development. There, the authors offer a modern comprehensive list with *pedagogical* and *organizational* characteristics (and advantages) of electronic materials. This framework brings a fresh pedagogical perspective into play, informed by theory and research that reinforces the suitability of digital materials for language teaching and learning. Among all the elements that Reinders & White (2010) feature, five deserve particular attention: *access* and *sharing* (organizational features), *multimedia*, *new types of activities* and *empowerment* (pedagogical features).

Starting with the *organizational* characteristics, *access* is understood as the opportunity for learners to use electronic materials at their preferred time whenever there is an electronic device available. Consistent with scholarship in the field of technology and language education, *access* is one of the driving forces that have caused the abovementioned shift towards the student-centeredness (Fotos & Browne, 2004). Next in the categorization, *sharing* refers to the accessibility of digital materials in the cloud, which allows learners and educators to engage with, or update, the materials without the need to return to

the physical classroom. *Sharing* is one of the strongest points for 21st century education (PIB). Many modern literary sources today, especially in the area of project-based learning, underscore the importance of *sharing* for meaningful and purposeful learning, as it allows learners to share with, and easily present, their work to a real audience (e.g. friends, family, etc.) (Markham, 2012; Krauss & Boss, 2013).

Shifting the focus now to the *pedagogical* features, *multimedia* has the ability to generate enriched learning environments that might reflect real-life communicative scenarios (Chappelle, 2010). Numerous studies also maintain that *multimedia* can also incorporate authentic and meaningful communication into all aspects of the language-learning curriculum (Pica, 1994; Leow, 1995; Chapelle, 2010). Furthermore, multimedia CALL facilitates the development of *new types of activities*. These innovative activities would differ from paper-based ones in that language is practised under a *multi-literacy* approach (Castañeda, 2013) in purposeful contexts (real-world scenarios). Some examples of new types of activities would include voice-recording practices, such as the ones mentioned above (see Huang & Hung, 2009; Hung, 2011). Finally, *empowerment* is related to learners' acquisition of control over their learning process. According to Shetzer and Warschauer (2000), this student-centered learning paradigm in which the responsibility rests on the learners' shoulders can fundamentally promote autonomous learning. Additionally, proponents of motivation theory such as Ushioda (2011) acknowledge that developing a sense of responsibility has a strong link with motivation enhancement.

METHODOLOGY

Participants

This case study involved 16 post-beginner, university-level, learners of Spanish who volunteered to participate in an extra-curricular task. The participants were undergraduate students with diverse linguistic backgrounds. Nevertheless, English was the predominant L1 for the majority. Their ages ranged from 18 to 39, among which 8 were female and 8 were male. All participants were taking Spanish to acquire credits in order to complete their academic degree programs. My role with the participants was that of their Spanish language educator.

The ACMC speaking task

An *extensive* speaking task was set up for the volunteer participants in order to answer the research questions of this small-scale case study:

1) *To what extent are ACMC speaking activities (undertaken via myBrainshark) suitable for speaking development?*
2) *What are the characteristics that make myBrainshark potentially beneficial for speaking development*?

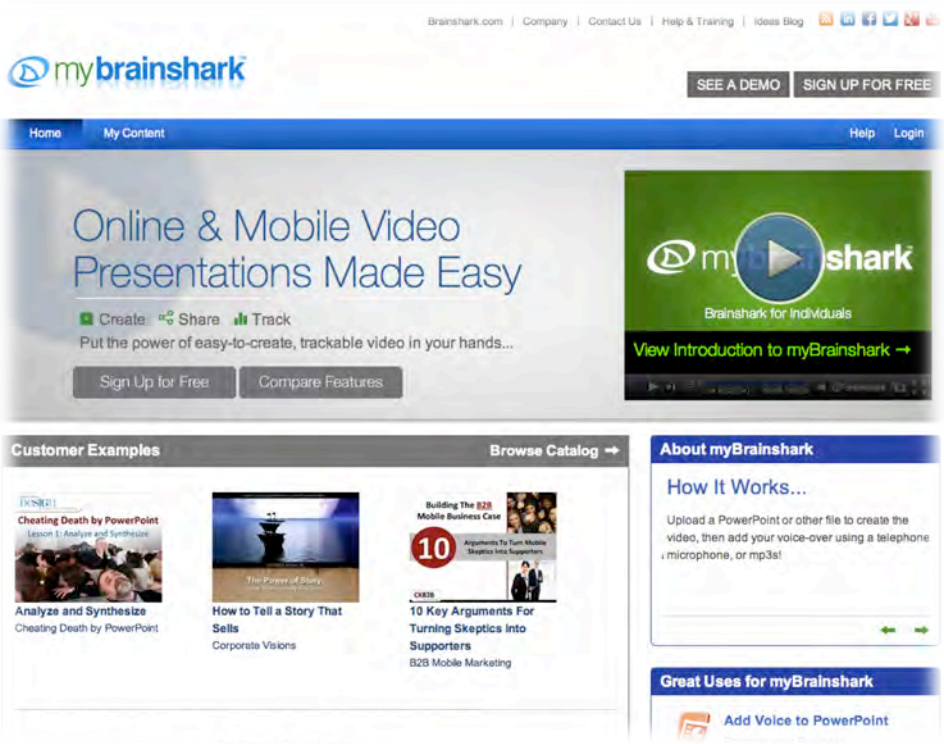
The task was configured under some of the parameters of a 21st century approach to language education (P21), and adhered to the communication standard 1.3 of the *American National Standards for Foreign Language Education*, whereby language learners present information, concepts, and ideas to an audience of listeners or readers on a variety of topics (National Standards, 2006). Several pedagogical objectives were pursued in this task. Firstly, it sought to revise the topic "talking about yourself" that the participants had visited during the first week of the course. Secondly, it served as a useful opportunity to further explore and consolidate the use of the past tenses in Spanish, as well as other grammar points, after a vacation period. The task also aimed at serving as a beneficial occasion to informally assess learners' speaking skills (and also provide individual feedback) in order to gauge the participants' level of oral proficiency. In order to complete this task, learners engaged with a particular manifestation of spoken ACMC, namely digital storytelling. Castañeda summarizes this phenomenon as:

> […] the practice of combining multiple modes of technology, such as photographs, text, music, audio narration, and video clips, to produce a compelling, emotional, and in-depth story. The digitally packaged short films range from three to five minutes long. Story plots include personal narratives capturing a defining moment in a person's life, accomplishment stories, memoirs honoring a special person, and community concerns. (2013: 46)

Therefore, for this task, the participants had to compose a digital story in which they had to narrate a timeline of the most important events in their lives, guided by a set of driving questions (Appendix 1). For the construction of the stories, the participants employed the web-based ACMC technology *myBrainshark* (Illustration 1). This tool primarily allows users to add voices to PowerPoint presentations, narrate Word documents or videos, create photo albums and produce podcasts. *myBrainshark* was selected over other ACMC

tools for its inherent simplicity, flexibility (*access*) and straightforwardness, its engaging interface that allows users to produce *authentic* and sophisticated content (*multimedia*) in a few steps, its ease of *sharing* the final production on the Internet with real audiences, and its editable nature that permits amendments once the work is finished. Moreover, *myBrainshark* increases the prospects of *new types of activities* because of its multiple applications. With this in mind, for the task participants were encouraged to create a PowerPoint presentation using personal pictures and upload it to *myBrainshark* for narration. No time limit was set for this task, although it was recommended that the recording should range between two and four minutes. Once the task was completed, the learners submitted their work via e-mail and individual feedback was provided the week after. This was the participants' very first experience with *myBrainshark*.

Illustration 1: myBrainshark



Methods

This case study combined qualitative and quantitative instruments for data collection. Due to editing constraints, only findings relevant to the focus of this paper are reported. Additionally, some of the usual research stages (e.g. sampling, research administration, instrument design, piloting, ethical issues) are not included. Readers are referred to the original case study for a full account of this investigation (Pino-James, 2012).

Firstly, the quantitative approach sought to explore to what extent ACMC speaking activities (undertaken on *myBrainshark*) were suitable for speaking development (RQ1). By using an online questionnaire (Appendix 2), this investigation tried to gain insights into, firstly, the processes involved in the task on *myBrainshark* and, secondly, the linguistic development perceived by the participants. The on-line questionnaire was constructed with the survey service *Survey Monkey*. This online survey product offers a variety of potential options for easily creating questionnaires, including templates and prefabricated questions. Furthermore, it also has potential advantages for both data collection and processing. The online questionnaire was e-mailed to the 29 participants involved in the task, from which only 16 successfully completed it.

Secondly, the qualitative data for this case study was collected through a variant of the stimulated recall method (Gass & Mackey, 2000; Mackey & Gass, 2005; Dörnyei, 2007). In essence, respondents of these techniques usually verbalize their thoughts after having performed a task, hence the term *recall*. The word *stimulated*, on the other hand, signals that a stimulus is needed to motivate the recall. The stimulated recall of this investigation was triggered by a set of written questions that were carefully designed to target specific thought processes and, thus, collect substantial data that would provide the answers for the RQs (Appendix 3). In particular, the stimulated recall sought to answer RQ2 and supply *thick description* for RQ1. A total of four volunteers undertook the stimulated recall from the initial targeted group of 29 learners.

Drawing on the studies of Mackey and Gass (2005) and Dörnyei (2007) to increase the quality of the retrospective data, some precautions were taken. First of all, the interval between the task on *myBrainshark* and the retrospective interview was no more than 48 hours. The process followed to achieve this was very straightforward. Once the presentation on *myBrainshark* was submitted via e-mail, an email containing the questions (stimulus) was automatically sent to the participants. Secondly, the stimulated recall was conducted in English rather than

in Spanish. This was the L1 of most of the speakers and L2 of speakers whose mother tongue was not English. This decision was made in order to make participants feel at ease, to encourage them to respond to the questions comfortably and to avoid anxiety. The qualitative data emanating from the stimulated recall was collected online by means of the free tool *Vocaroo*. This piece of on-line technology enables users to easily generate a 5-minute voice recording that can be easily shared in social networks, embedded or e-mailed in three simple steps. Additionally, recordings are downloadable, which is one of the reasons why this tool was selected. For the purposes of the data collection, a brief video tutorial was sent to the participants via e-mail explaining the use of *Vocaroo* since this piece of technology was unknown to them.

FINDINGS AND DISCUSSION

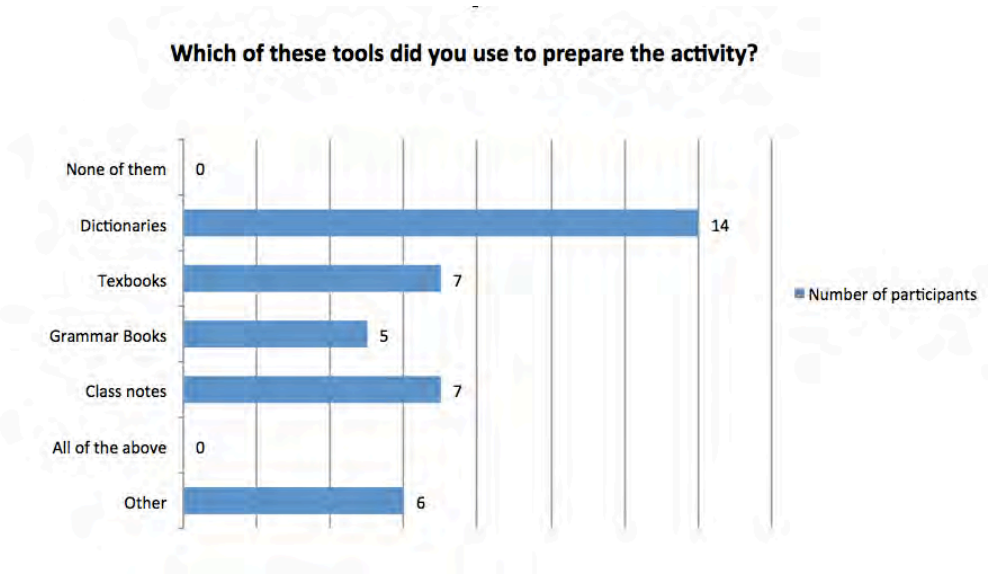
Language-learning processes encountered in the ACMC task

The quantitative and qualitative angles of inquiry of this case study show that there are beneficial language-learning processes involved in the ACMC speaking task undertaken with *myBrainshark*. These can be summarized as:

- Self-regulating behavior (use of diverse tools)
- Planning what to say
- Scripting
- Reading aloud
- Rehearsing elocution
- Listening to one's recording.

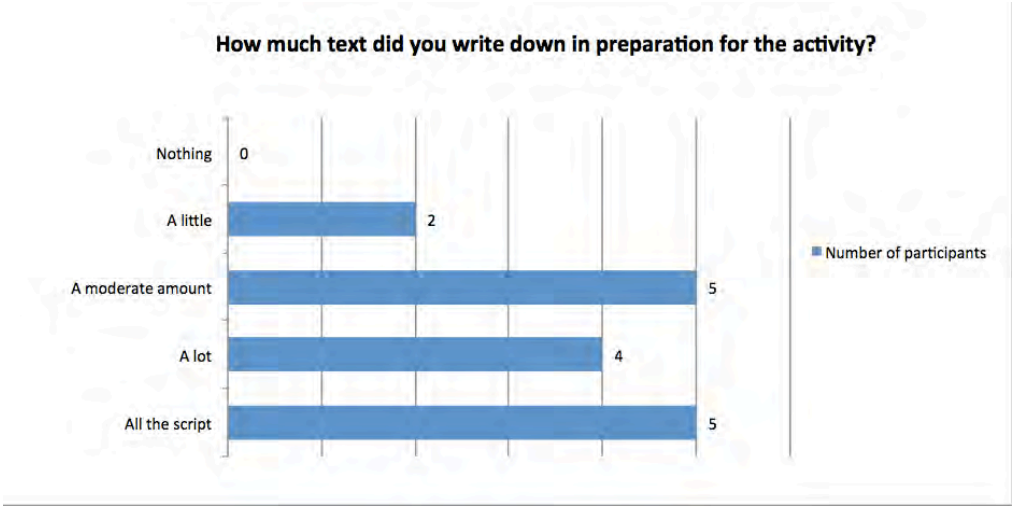
Firstly, as shown by Figure 1, the findings suggest that participants took charge of their own learning and sought out the resources needed to perform the task. These results are consistent with mainstream autonomy research that reveals that *empowerment* of learners and *sense of control* might lead to learners' autonomy (Shetzer & Warschauer, 2000; Dörnyei, 2001; Benson, 2011; Ushioda, 2011). Researchers working on this paradigm agree that, through decision-making, learners can grow a sense of responsibility for learning that makes them responsible for the right and the wrong decisions they make. Resources differ among the participants, although there seems to be a strong predisposition for the use of *dictionaries* both in their paper-based and electronic format.

Figure 1: Distribution of tools used in preparation for the speaking task



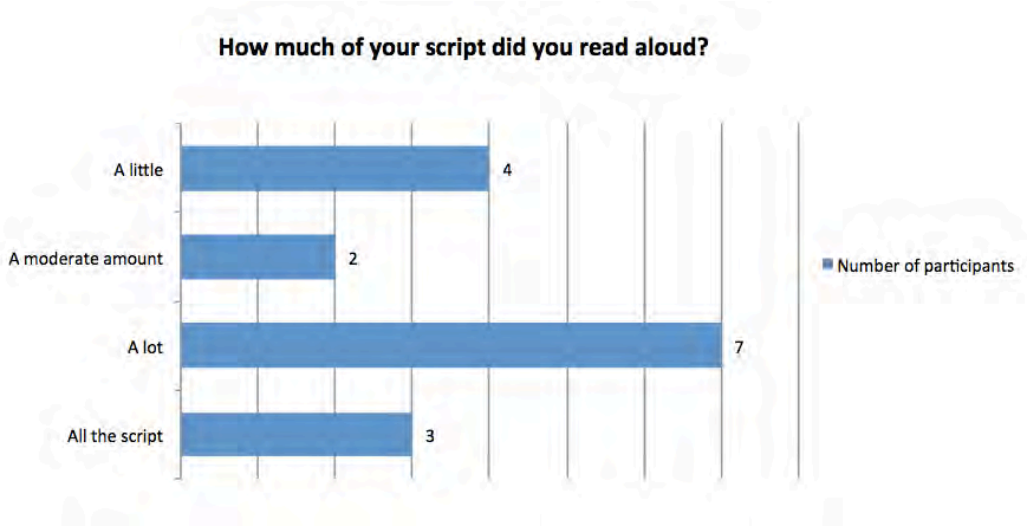
Shifting attention to the next figure, the findings illustrate that all of the participants planned what to say for the digital story. They did so not only 'in their heads', but also 'on paper' by turning their ideas into written output. Thus, Figure 2 illustrates that 14 out of 16 of the respondents wrote between a *moderate amount* and *all the script* in preparation for the task.

Figure 2: Distribution of amount of text written down for the task



One logical reason for this finding could be the participants' language proficiency (post-beginner level). As can be expected, language learners at this particular language level might not be linguistically skilled enough to perform an *extensive* oral monologue without written assistance. Interestingly enough, academics like Lambert (2007) observe that scripting is an established step of the digital storytelling process. This would mean that, perhaps, the practice of writing text down is more related to the development of the digital storytelling itself than to the actual level of language proficiency of the learners. This said, those participants who chose any of the options available in Figure 2, except for the option 'nothing', were able to move on to the additional question of the online questionnaire displayed in Figure 3. Here, analysis of the data reveals that a high percentage of these participants read most of their script aloud (10 out of 16 participants).

Figure 3: Distribution of amount of the script read aloud



Related to this finding is the assumption that reading aloud (RA) could, in fact, be another potential identifiable step in the digital storytelling process – and in ACMC speaking tasks by extension. Moreover, the results give reason to believe that the intended speaking task eventually proved to be an RA type of task where the learners did not develop their speaking skills but, rather, their ability to read in the target language. In contrast to this supposition, mainstream RA research shows that reading aloud in a foreign language can indeed be beneficial rather than detrimental for oral proficiency development (see Celce-Murcia *et al.,* 1996; Birch, 2002). According to RA supporters, this practice

fosters fluency (Gibson, 2008), consolidates newly-acquired speech patterns (Chun, 2002), and focuses awareness on intonation, pronunciation (Davis & Rinvolucri, 1988) and suprasegmental features such as rhythm and speed (Ortiz *et al.,* 2010). In addition to these arguments, the particular type of RA found in this study also seems to differ from typical RA practices conducted in the language classroom (e.g. reading aloud a passage or a short text to others). Apparently, reading text from one's own production aloud would fit squarely with what is known as *non-semantic reading* (see Schwartz *et al.,* 1980; Coslett, 1991). In this specific type of RA practice, texts are read without focusing on their meaning or content, but rather on their form (Harley, 2008). In terms of these arguments, it could be reasoned that *non-semantic* RA practices, such as the one found in this investigation, might actually offer learners the possibility of focusing on their phonological awareness to a great extent; in turn, this suggests that the ACMC speaking task was not a complete failure, even though most of the learners ended up reading their text aloud.

The results of this study further illustrate that most participants rehearsed once they planned what to say and wrote down a certain amount of text (Figure 4). Additionally, Figure 5 presents the number of times that the participants listened to their own recording before submitting the final piece. The findings indicate that 15 out of 16 participants reviewed their work at least once.

Figure 4: Distribution of number of rehearsal attempts

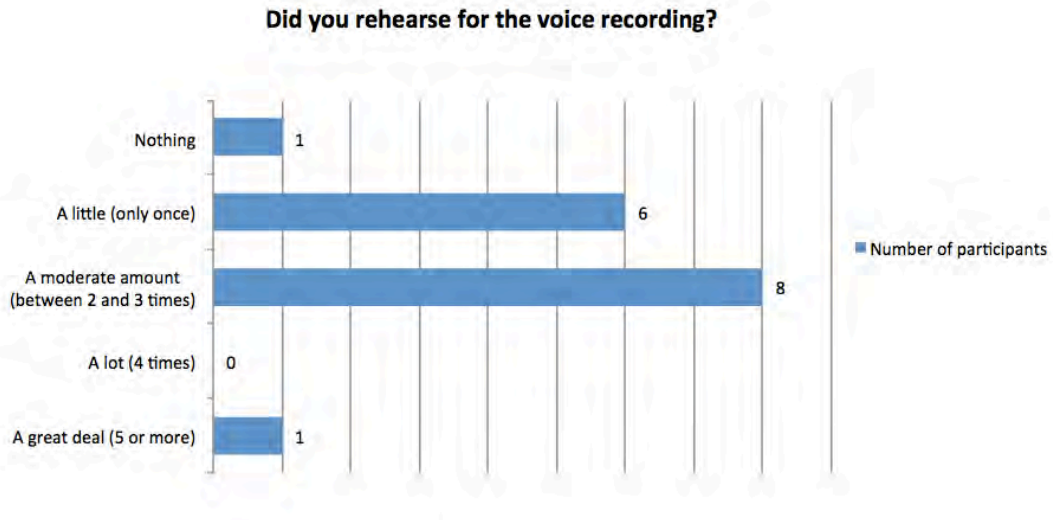
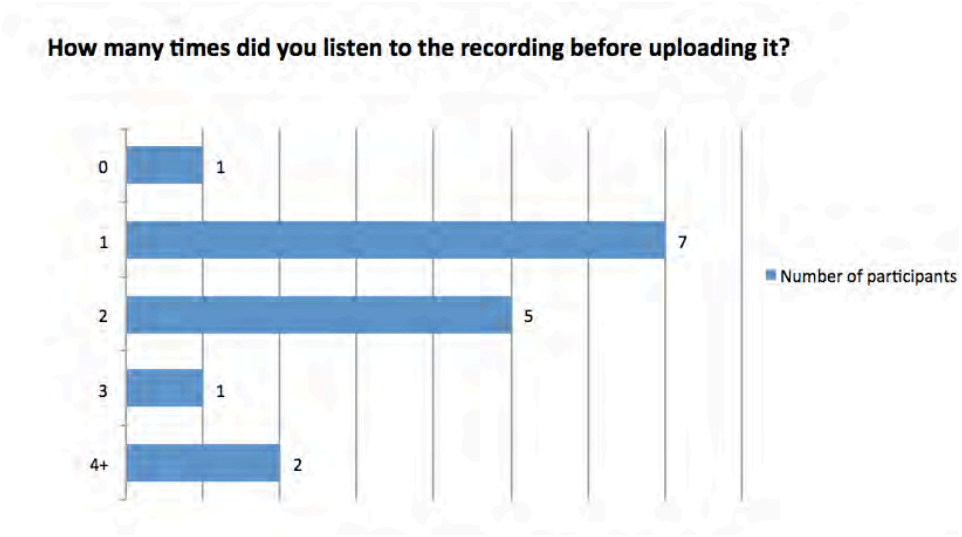


Figure 5: Distribution of number of times learners listened to their recordings



Taking these findings into consideration, it is reasonable to assume that learners demonstrated a certain degree of agency and commitment to generating a satisfactory piece of work. Furthermore, the fact that they listened to the recording on more than one occasion indicates that they also undertook an analysis of their own linguistic output. Along these lines, Chapelle (1998) postulates that language learners need to notice errors in their output when performing activities by means of technology. By noticing linguistic problems, learners can modify their output and internalize new forms (Swain & Lapkin, 1995). As Chapelle notes:

> When errors are recognized in comprehensible output, the process of the learner's self-correction is also believed to be beneficial particularly because the linguistic items for which self-correction occurs may be those for which learners' knowledge is fragile. (1998: 24)

This finding also harmonizes with conclusions drawn in modern digital storytelling research. Here, it is generally reported that multiple speech draft recordings improve learners' awareness of their oral proficiency in the target language (see Castañeda & Rodríguez-González, 2011; Castañeda, 2013).

Learners' attitudes towards linguistic development in the ACMC task

Table 1 represent learners' attitudes towards linguistic enhancement. Considering firstly the speaking aspects, 15 out of 16 participants in this study showed a favourable attitude towards enlarging their *overall speaking skills* through the ACMC task on *myBrainshark*. The following item in Table 1 illustrates that 12 out of 16 respondents felt confident that their *public-speaking skills* could also be positively developed. Furthermore, the results regarding *fluency* again show that virtually all respondents (15 out of 16 participants) regarded the task as useful in cultivating their *fluency*. A similar result of agreement is presented (14 out of 16 participants) with regard to participants' perception of *pronunciation* improvement.

Table 1: Students' perceptions of linguistic development

	Strongly disagree	Disagree	Don't know	Agree	Strongly agree
Overall speaking skills	0 (0.0%)	0 (0.0%)	1 (6.3%)	**12 (75%)**	**3 (18.8%)**
Public-speaking skills	0 (0.0%)	1 (6.3%)	3 (18.8%)	**12 (75%)**	0 (0.0%)
Fluency	0 (0.0%)	0 (0.0%)	1 (6.3%)	**11 (68.8%)**	**4 (25%)**
Pronunciation	0 (0.0%)	1 (6.3%)	2 (12.5%)	**9 (56.3%)**	4 (25%)
Grammar	0 (0.0%)	**3 (18.8%)**	**7 (43.8%)**	5 (31.3%)	1 (6.3%)
Vocabulary	0 (0.0%)	3 (18.8%)	2 (12.5%)	**10 (62.5%)**	**1 (6.3%)**
Writing	0 (0.0%)	**8 (50%)**	**4 (25%)**	2 (12.5%)	2 (12.5%)

Based on these findings, the digital story conducted via *myBrainshark* (whether it eventually resulted in a RA practice or not) could be perceived as potentially useful in developing *overall speaking skills* as well as *public-speaking skills*, *fluency* and *pronunciation*. This is consistent with previous research in the

field (Abrams, 2003; Volle, 2005; Huang & Hung, 2009; Sun, 2009; Hung; 2011) that indicate a positive relationship between ACMC and speaking skills. However, the qualitative results also reveal that, despite the aforementioned optimistic attitude shown towards speaking development, some learners also feel that ACMC speaking practices are not as effective in cultivating oral skills as a real-life interpersonal communication:

> I do think that the, uhm, the **pressure that comes from a conversation** in a foreign language isn't really replicated by *myBrainshark*... uhm, I don't think that that's gonna come from it. (Student A)

According to the present standpoint, one could well argue that this could be the reason why there is a minor disagreement registered for *public-speaking skills* development. This would be explained by the fact that this task involves speaking in front of an electronic device rather than in front of an audience. The lack of interpersonal communication is a recurrent issue found in studies concerned with speaking by means of technology (see Abrams, 2003; Huang & Hung, 2009; Sun, 2009). Evidently, real conversational contexts feature multiple variables that do not seem to take part in asynchronous unidirectional transmission of information. Some of these aspects are external pressures, turn-allocational techniques, interlocutors that occupy the same time frame within a turn, or fight for the conversational floor, to name but a few (Briz, 2000; Schegloff, 2000). Nonetheless, following up on Piper's (1986) arguments, attributing speaking development only to human interaction (either face-to-face or technology-enhanced) could be potentially unsatisfactory. As the author notes, this "is not logical, since to do so would imply that foreign language learning only takes place through conversational means" (1986: 198). In effect, although oral ACMC does not encapsulate most of characteristics present in interpersonal communication, it can still offer language-learning opportunities due to the unique nature of the electronic medium. For instance, digital storytelling tasks, such as the one at hand, could increase language efficiency and also help understand how to use language in authentic contexts (James, 1996; Harless *et al.,* 1999), thus serving as a preliminary stepping stone towards real communication (Abrams, 2003).

In another vein, the data collected suggests that *feedback* on learners' work should also be taken into consideration in the development of speaking proficiency. As some of the qualitative findings indicate, improvement on certain linguistic aspects such as pronunciation can be majorly connected to the feedback

provided by the educator rather than the task process *per se*. In other words, it seems likely that, through feedback procedures of coaching and scaffolding, language learners might be able to improve their pronunciation in oral ACMC tasks. In accordance with this, one could argue that positive feedback, in addition to the aforementioned learners' oral output awareness (Chapelle, 1998; Castañeda, 2013) realized by continuous recording attempts, are the main cause for pronunciation development:

> I think if I get to practice speaking and then **listening to myself and if I get feedback about my recordings** then maybe **after doing a number of times then, uhm, I might be able to improve on certain weak areas if it's like pronunciation** or grammar or something like that so, erm, it might be able to enhance speaking skills but it's really I think what, what, what I make of it, how I use it and, **the type of feedback I can get** maybe. (Student B)

> Uhm, it's a good way to, to practice your pronunciation and the teacher can hear you and, I guess it also helps because you can keep re, re, recording it. Uhm, **you can carry on, sort of, practicing and improving on your pronunciation** and things. (Student B)

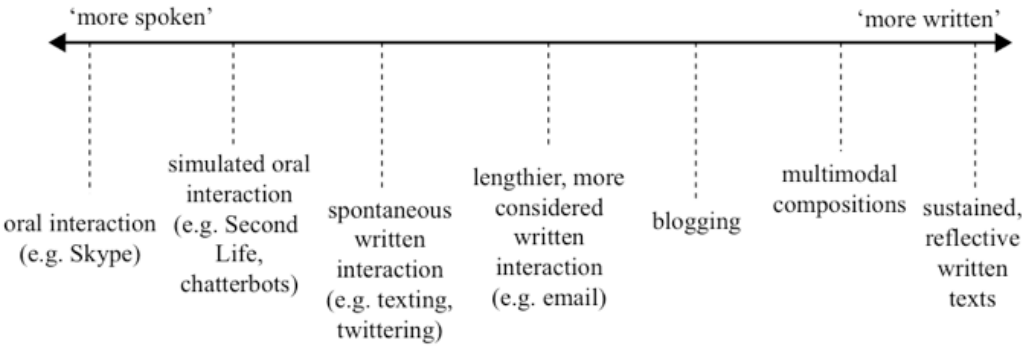
The findings disclosed in this section challenge modern frameworks that explore different forms of communication through the electronic device. In general, these frameworks do not account for oral ACMC and, therefore, do not acknowledge ACMC as being potentially capable of promoting speaking proficiency. To illustrate, Levy and Stockwell (2006) provide a modal framework for CMC encompassing different forms of communication. As observed in Table 2, these are classified according to temporal response and span from asynchronous written text to synchronous oral interaction. However, there is no sign of oral-based ACMC between text-based ACMC (BBS) and text-based SCMC (MOO).

Table 2: The modal considerations of CMC (Levy & Stockwell, 2006: 97)

Types of CMC				
E-mail	***BBS*** *(Bulletin Board System)*	***MOO*** *(Multi-object-oriented)*	***Chat***	***Video/Audio conferencing***

A more recent framework (Kervin & Derewianka, 2011) maps the use of different technologies in a mode continuum (Figure 6). This classification tries to explain how numerous technologies can contribute to FLL depending on where their use falls on the continuum. Hence, Figure 6 locates sustained reflective written texts at one end of the continuum (ACMC), and moves on towards more synchronous spoken-like practices situating SCMC VoIP applications at the other end. Again, this framework does not pay heed to spoken ACMC and moves from spontaneous written interaction to SCMC-simulated oral interaction.

Figure 6: The mode continuum (Kervin & Derewianka, 2011: 329)



Perceptions of the ACMC speaking task undertaken via myBrainshark

Participants' perceptions of the ACMC speaking task disclosed that these types of practices could possibly lead to an increase in confidence:

> I think in terms of confidence is much of more you speak out loud in a language isn't your mother tongue, I think. That helps a lot because, the main problem, or I, I found was sort of trying to speak it because in class there are other people in class that are much, much sort of, have they accent a bit more perfect and things like that so **it might put you off a little** bit from speaking out loud all the time. Erm, so, **by speaking on the computer the teacher can hear it himself, then that helps a lot**. (Student C)

In essence, the data above proposes that a rise in confidence could be caused by the fact that ACMC speaking practices provide bystanders with opportunities to articulate their thoughts outside the classroom. This finding is in line with previous studies in the field, where similar patterns have been found. For

example, in her study on asynchronous voice conferencing and speaking anxiety, Poza (2011) observes that ACMC has the capacity of providing low-stress environments that might enable self-expression outside the classroom. The author claims that *access* (freedom from the time and space pressure), elimination of exposure to the physical presence of other learners, pace of interaction, additional time to think, and organization of ideas, might in fact expand the quality and quantity of the spoken output. Building upon these statements, the previous quote also lends support to the conjecture that confidence could also be boosted by means of *personal* attention from the educator – where individual needs are catered for without neglecting the progression of the whole class.

In addition to confidence, this case study found that learners believe that speaking tasks of this particular kind can potentially fill part of the gap left by the lack of in-class oral practice:

> **We don't really have the time to do enough oral practice in class** so it's a good way to like, be able to **go home or do it somewhere** else really and get my practice in and then send it to my teacher to get, you know, some **feedback about how I can improve**. (Student B)

At another level, the participants unanimously showed their willingness to continue using ACMC technology in order to enhance their oral competence, which signals the potential of *myBrainshark* to facilitate speaking development. To mention but a few reasons, the learners emphasized facts such as the enjoyable experience they went through when creating the stories, the potential of *myBrainshark* for creating such stories, the multiple possibilities that the tools offers for oral practice, and its suitability for developing small-scale projects:

> Uhm, Yes. I think it's **very useful** as I said above and I think, I think just the **range of activities you can do on it show how easy is to use** and it's a **good a service** so long the Internet works. (Student C)

That being said, we must be keenly aware that these findings by no means indicate that spoken ACMC should be used as a full substitute for in-class speaking practice. Student D underscores this as follows:

> I think that using *myBrainshark* to compensate for lack of speaking practice in the language class is a good idea. Erm, although it's not quite as **organic as having a conversation**, those people doing

> background research can think about what they're going to say. (Student D)

As was pointed out earlier, ACMC oral tasks hold different capabilities from those occurring within interactive scenarios. Therefore, they should not be assessed under the same criteria.

Potential characteristics of myBrainshark for speaking development

In the current study, when participants were asked about their perceptions of the advantages and disadvantages of *myBrainshark,* responses were varied but enlightening. As a matter of fact, no negative characteristics were particularly registered, since negative observations always referred to the processes involved rather than the tool itself:

> It was quite time-consuming uhm, but I think this is just because I was using for the first time. It took me a long time to find appropriate photos to use uhm, to kind of to prepare what to say and tink and, erm, also to get grips of it little bit. But I feel that if this preparation had been done beforehand **actually using *myBrainshark* itself do not take very long** uhm it was although self-explanatory. I think next time I'll be able to do it faster. (Student A)

This comment falls in line with empirical evidence from digital storytelling research, where it has been argued that, at the beginning stages of the task, learners feel that the technological aspect of it is at the forefront for them. Nevertheless, they soon realize that the whole project is worth doing once they have mastered the tool, developed their stories and assessed the magnitude of their outcome (Banaszewski, 2002; Castañeda, 2013).

Regarding the potential advantages, surprisingly the majority of participants' answers were associated with *quality-related* aspects (see Chapelle, 2003; Coll & Engel, 2008) rather than *organizational* and *pedagogical* characteristics (see Reinders & White, 2010). However, these were also addressed in the qualitative data, though in an implicit manner (Table 3 & 4).

Table 3: Implicit organizational characteristics of myBrainshark

Organizational	*Implicit participants' observations*
Access	*Implied by the possibility to do the task at home or somewhere else.*
Sharing	*Implied by sharing the presentation with the teacher for feedback.*

Table 4: Implicit pedagogical characteristics of myBrainshark

Pedagogical	*Implicit participants' observations*
Multimedia	*Implied by the nature of myBrainshark to generate professional video presentations.*
New types of activities	*Implied by the ability of myBrainshark to accommodate diverse types of speaking activities (non-achievable with traditional means).*
Empowerment	*Implied by learners' capacity to take complete control over several aspects of the task.*

Returning to the *quality-related* characteristics, a possible explanation for this phenomenon would be that the questions of the stimulated recall were general and not specifically designed to address different types of characteristics individually. Additionally, another conceivable alternative interpretation would be that learners were usually more struck by salient features than by innate characteristics of the technology. On this basis, the results seem to indicate that participants identified the following *quality-related* characteristics of *myBrainshark*:

- Simplicity and user-friendliness
- Effectiveness
- Innovative service.

These findings concur with several evaluative frameworks of CALL materials that ascertain most of these features as a requirement for language learning to happen in the digital age (Hubbard, 1996; Chapelle, 1998; Burston, 2003; Coll & Engel, 2008). As revealed by the participants of this study, *simplicity* and *user-friendliness* emanate from an online environment, which is easy to navigate and in which learners can easily record their output within an accessible and attractive interface:

> I also like the **layout** of the website because it's not, it's, it's very **modern**, so it's encouraging if I have to sit and work on *myBrainshark*. (Student B)

> I really like the fact that uhm, it's just really **simple** so I just have to **click and I can start recording, I can stop and listen**. (Student B)

> It's very **easy to navigate** round. (Student C)

Academics like Hubbard (1996) and Coll & Engel (2008) consider these particular features *conditio sine qua non* to embrace technology for language-learning purposes. Additionally, considering Burston's (2003) evaluative framework of technology, *simplicity* and *user-friendliness* also promote pedagogical validity and curriculum adaptability. In essence, the fact that learners can undertake ACMC speaking activities easily, classifies *myBrainshark* as a potential candidate to successfully accommodate language development. *Effectiveness*, on the other hand, builds on the previous characteristics. According to the data obtained, *effectiveness* is realized by the ease of uploading documents and pictures and storing presentation animations:

> I was surprised how was **easy to upload** different pictures, presentations... (Student C)

> I went to uh, time my slide animations to match with the recording and um, it noticed that I was, **it noticed that I had a presentation with animation timings on it**. (Student A)

Burston describes *effectiveness* in the area of technology as the phenomenon of achieving better results than by traditional means (2003: 37). Thus, the findings in this section hint at *myBrainshark's* ability to do so primarily through its ability to facilitate *new types of activities*. Moreover, findings also suggest that *myBrainshark* could obtain better results than other (not as sophisticated) voice-recording tools. Put simply, the fact that *myBrainshark* allows learners to record their output over a solid visual support (e.g. Word documents, PDFs, PowerPoint presentations and pictures) indicates that *myBrainshark*, compared to other tools, could achieve improved learning outcomes. Finally, it seems that the participants were also attracted to the *innovation* of *myBrainshark.* This fact shows that learners may not yet have come across technologies capable of producing sophisticated presentations in the way *myBrainshark* does. As reported by the qualitative data, some learners were impressed by the quality of the presentations which, according to them, looked very professional:

> I think it's a very good way of making a potentially v**ery fluent, very professional-looking presentations** as I said in an easy way. (Student A)

Innovation has become another of the most cited key requirements to attain linguistic growth in technology-enhanced contexts (Burston, 2003; Tomlinson, 2003; Chapelle, 2010). For example, in listing principles for evaluating language materials, Tomlinson (2003: 21) argues that they should have an impact on learners through novelty, variety, attractive presentation and appealing content. As is well-known, *innovative* technologies usually stand a better chance at engaging learners in tasks than those to which learners are already accustomed. Nevertheless, as Tomlinson (2012) notes, it is important to consider that *innovation* in technology is bound to be ephemeral and, thus, its spark of novelty short-lived. This fact signals that this salient characteristic of *myBrainshark* will likely be unimportant in the future.

CONCLUSION

Considering the quantitative and qualitative findings presented and discussed in this article, a number of salient conclusions can be drawn. In consequence, this section returns to the original questions raised and provides a substantial response to them.

RQ1: To what extent are ACMC speaking activities (undertaken via myBrainshark) suitable for speaking development?

As shown in this case study, ACMC speaking tasks seem to be suitable for speaking development for multiple reasons. Firstly, these practices appear to have the capacity to promote aspects of oral communication including: *overall speaking skills*, *public-speaking skills*, *pronunciation* and *fluency*. Secondly, expressing ideas orally in asynchronous communication also seems to entail a large amount of cognitive, metacognitive and practical processes, which are indeed satisfactory for language learning. In particular, this present study identified the *organization of ideas*, the *search* and *use of various resources to complete the task*, *writing practice*, *reading aloud*, *rehearsal of elocution*, and *revision* and *evaluation of the final product*. These findings adhere to the so-called *multi-literacy approach* to learning, in which diverse learning processes and skills come into play when pursuing a language-learning goal (Castañeda, 2013). Interestingly, the *extensive* speaking task eventually resulted in a practice similar to reading aloud. The data showed that all the participants read the text they had written down to support the oral monologue aloud, either in part or in its entirety. As suggested above, a possible cause for this would be that post-beginner learners still do not have the linguistic competency needed to articulate long stretches of oral output; another cause could simply be the very nature of digital storytelling (Lambert, 2007). Nevertheless, it was also pointed out that the fact that students read aloud was not entirely detrimental to their speaking development. In fact, echoing previous research on the nature of RA and its appropriateness for language learning, through this practice learners have an enriching opportunity to improve aspects of their speaking. Thirdly, the findings of this case study also raise an important characteristic that reinforces the suggested suitability of ACMC activities in promoting speaking development, namely an increase in confidence. Thus, participants' perceptions hint at a possible drop in levels of anxiety. This argument is supported by the reported stress-free atmosphere provided by ACMC and the possibility of educators to attend individually (and privately) to learners' needs. Finally, the results illuminate that ACMC speaking tasks via *myBrainshark* could be employed to compensate for the scarcity of speaking practice in the foreign language class. Learners' unanimous positivism towards these types of exercises advocates that they believe in the potential of ACMC to cultivate oral proficiency. However, it is suggested that oral ACMC is not considered as the panacea to 'fill the speaking gap' left by the lack of speaking practice in the classroom. That is, by no means should ACMC be compared to organic conversation or to SCMC interaction. As

said earlier, ACMC does not hold the same capabilities as human interaction or the same purposes (see Levy & Stockwell, 2006). Thus, it should be principally considered as a powerful supplement for educators and offer learners additional speaking opportunities which, in turn, could prepare them better for real-world communication.

RQ2: What are the characteristics that make myBrainshark potentially beneficial for speaking development?

The salient features that make *myBrainshark* potentially viable for linguistic development seem to be its *simplicity* and *user-friendliness*, *effectiveness* and *innovation*. In the field of technology and language learning, these characteristics are essential in promoting engagement and improve learning outcomes (Burston, 2003; Tomlinson, 2003; 2012). From a practitioner's standpoint, learners feel more attracted to unfamiliar technologies (*innovation*), especially if these allow sophisticated content to be easily created (*effectiveness* and *user-friendliness*). On a different note, *myBrainshark* is just *another* tool and the results of this investigation should simply serve as an informative basis by which technologies facilitating ACMC spoken practices can be appropriately selected. In this light, educators are encouraged to consider the aforementioned characteristics when planning to use technology for the same purposes. Nevertheless, it is suggested that, as Burston observes, language educators firstly select technologies based on the curricular needs:

> No matter how technically brilliant a program may be or how rich the activities it provides, if it does not advance the teacher's curricular objectives, there is no point in acquiring it. (2003: 39)

It is a fundamental tenet in the field that pedagogy must drive technology and not the reverse (Burston, 2003; Reinders & White, 2010; Tomlinson, 2012). In consequence, and building upon Burston's (2003) suggestions, it is recommended that the following stages are completed in order to successfully implement technology: 1) identification of curricular needs, 2) selection of a piece of technology that meets those needs, 3) implementation driven by pedagogically sound methodology. It is understood that the parameters underlying this multi-staged process are not easy. Also, it is known that some educators may not have the formal training required to approach technology from a pedagogical standpoint. Further, available technologies occasionally do not exactly meet with curricular needs and some degree of adaptation is required (Burston, 2003). That said, it is hoped that this article may contribute to a better

understanding of the nature of each one of the aforementioned processes and also proves to be a fair example of technological adaptability. Finally, it is also hoped that the data presented may inspire educators to embrace ACMC speaking practices in the near future.

LIMITATIONS

One of the limitations of this present case study lies in the number of participant samples. With a total amount of 16 participants for the online questionnaire and 4 participants for the stimulated recall, results cannot be considered entirely defining, but representative of this group. However, the data gathered provides clear insights into the phenomenon. That is, the small number of participants provided sufficient substantial data to generate solid postulations.

Another limitation of this paper is that this case study only targeted a post-beginner group of foreign language learners. This indicates that, initially, the results should apply only to lower-proficiency audiences until further research is undertaken with higher-proficiency foreign language learners.

IMPLICATIONS

Several implications stem from the results of this case study:

- ACMC speaking practices should be encouraged because of their suggested capacity to improve speaking aspects.
- *myBrainshark* seems to have the potential to successfully facilitate speaking development.
- ACMC speaking practices should not be considered a substitute for oral interaction, but a complement that might better prepare learners for real-world conversation.
- Every effort should be made by language educators to integrate technology under pedagogically sound methodology – when the implementation is required, of course.
- There is a need for further research on this topic. This study merely opens the door to further experimental discovery and exploration. For that reason, and far from students' perceptions, attention should now be given to 1) whether linguistic development actually occurs with ACMC

speaking practices via *myBrainshark* in lower-proficiency levels, 2) whether this linguistic development can also occur in higher levels.

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APPENDIX 1: *MYBRAINSHARK* DRIVING QUESTIONS

- Who are you? What's your personality like? *(¿Quién eres? ¿Cuál es tu personalidad?*)
- Talk about your birthplace (*Habla sobre tu lugar de nacimiento*)
- Describe your family (*Describe a tu familia*)
- Talk about your hobbies and likes/dislikes (*Habla de lo que te gusta o no te gusta*)
- Special moments in your life (*Momentos especiales en tu vida*)

APPENDIX 2: ONLINE QUESTIONNAIRE (*SURVEYMONKEY*)

Page: Section I - Personal Data

1. Electronic consent

2. Gender:
   a) Male
   b) Female
3. Age group
   a) 17 or under
   b) 18-20
   c) 21-29
   d) 30-39
   e) 40-49
   f) 50-59
   g) 60 or older
4. E-mail address: _____

Page: Section II - Activity on *myBrainshark*

5. How much time did you spend for the preparation of the activity?
   a) 0-15 minutes
   b) 15-30 minutes
   c) 30-60 minutes
   d) 60+
6. Did you collaborate with someone to do the activity?
   a) Yes
   b) No
7. Which of these tools did you use to prepare the activity?
   a) None of them
   b) Dictionaries
   c) Textbooks

d) Grammar books

e) Class notes

f) All of the above

g) Other (please specify): _____

8. Did you plan what to say?

a) Yes

b) No

9. How much text did you write down in preparation for the activity?

a) Nothing

b) A little

c) A moderate amount

d) A lot

e) All the script

10. How much of your script did you read aloud?

a) A little

b) A moderate amount

c) A lot

d) All the script

11. Did you rehearse for the voice recording?

a) Nothing

b) A little (only once)

c) A moderate amount (between 2 o 3 times)

d) A lot (4 times)

e) A great deal (5 or more)

12. How many times did you listen to the recording before uploading it?

a) 0

b) 1

c) 2

d) 3

e) 4+

13. Did you share your work with someone on-line? (family, friends, etc.)
    a) Yes
    b) No

Page: Section III - *myBrainshark* overview

14. *myBrainshark* can be helpful in improving my overall speaking skills
    a) Strongly disagree
    b) Disagree
    c) Don't know
    d) Agree
    e) Strongly agree
15. *myBrainshark* can be helpful in improving my public-speaking skills
    a) Strongly disagree
    b) Disagree
    c) Don't know
    d) Agree
    e) Strongly agree
16. *myBrainshark* can be helpful in improving my speaking fluency
    a) Strongly disagree
    b) Disagree
    c) Don't know
    d) Agree
    e) Strongly agree
17. *myBrainshark* can be helpful in improving my pronunciation
    a) Strongly disagree
    b) Disagree
    c) Don't know
    d) Agree
    e) Strongly agree

18. *myBrainshark* can be helpful in improving my grammar
    a) Strongly disagree
    b) Disagree
    c) Don't know
    d) Agree
    e) Strongly agree
19. *myBrainshark* can be helpful in improving my vocabulary
    a) Strongly disagree
    b) Disagree
    c) Don't know
    d) Agree
    e) Strongly agree
20. *myBrainshark* can be helpful in improving my writing
    a) Strongly disagree
    b) Disagree
    c) Don't know
    d) Agree
    e) Strongly agree
21. Narrating a personal timeline in *myBrainshark* was an interesting activity
    a) Yes
    b) No
22. Overall, I am satisfied with my performance on *myBrainshark*
    a) Yes
    b) No

APPENDIX 3:
QUESTIONS FOR THE STIMULATED RECALL VIA *VOCAROO*

1. What do you think is the level of difficulty of *myBrainshark*?

2. What characteristics of *myBrainshark* do you like the most and why? (e.g. easy-to-use, eye-catching, etc.)

3. What characteristics of *myBrainshark* do you dislike the most and why? (e.g. too time-consuming, etc.)

4. What do you think about the idea of using of *myBrainshark* to compensate the lack of speaking practice in the language class?

5. Do you think that *myBrainshark* can potentially enhance speaking skills (e.g. fluency, pronunciation, etc.)? Why?

6. What do you think about the idea of using *myBrainshark* to build up your confidence in speaking a foreign language? Do you think this is possible?

7. Would you like to do more speaking activities with *myBrainshark* in the future? Why?