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# A Facebook-based approach to asynchronous communication in medical English

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**Abstract**

**Background**: Social media are widely used in informal communication, but how about in professional communication? This study reflects on a task-based action research intervention focusing on asynchronous Facebook (FB)-integrated professional communication for Medical English (ME). The **purpose of the study** was to understand if and how FB-integrated learning could be successfully customised to Medical English in order to provide further asynchronous communication to medical students and to evaluate their opinions in terms of its "usefulness" and "satisfaction". **Methods:** Online class observation, rubric-based assessment of students' productions, a Google form questionnaire and informal class discussions were selected for data collection. **Main Argument**: Specific Medical English task elements (peer evaluation) and factors (communication versus accuracy) could influence the students' performance, satisfaction, and motivation in FB-based ME communication. **Conclusion:** Incorporation of Facebook-integrated communication was a quantitatively (democratic participation) and qualitatively (comfort of asynchrony) positive experience in ME blended learning.

Keywords: asynchronous speaking, Facebook, Medical English, professional communication, social media;

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## 1. Social media and language education

Social media including Facebook, Instagram, Linkedin, Blogger, YouTube, Twitter, Google Docs, and Skype – to mention just the best known – are networked tools that allow people to meet, interact and share ideas, interests and artefacts (Anderson, 2009). They cross geographical boundaries, magnify audiences and bring new affordances of cooperation, visibility, peer feedback, interactivity (Virvou, Troussas, Caro & Espinosa, 2012), and durability (Boyd, 2014), which qualify social media as appropriate tools and platforms for education delivery. Ever since the early 2000s language teachers with technology as part of USA TESOL Electronic Village Online courses of professional development were among the first to understand this and, therefore, they were at the forefront of using FB and other social media as channels for informal communication (https://tinyurl.com/uc5besa). Facebook was responding to their challenge of providing worldwide instruction and almost instant communication among learners through an effective, free-of-charge, and versatile platform which supports embedding of different media and with which participants were already familiar. There have been other positive experiences on the use of social media in education (Yu, Tian, Vogel & Kvok, 2010) and in promoting language learning in particular (Kabilan, Ahman & Abidin, 2010), social media making L2 learning social, more enjoyable, and less stressful (Carmean & Haefner, 2002) while students of French as a foreign language were encouraged to have more conversations (Beauvois, 1998).

As FB has grown into a potentially powerful social communication and widely popular medium which is embedded in the learners' daily lives, it has been adopted rapidly in English language learning for ease of interaction, user friendliness and information exchange with peers. What has also mattered in the use of FB as a language learning platform is the extension of communication between group members, students learning by sharing and negotiating, which, according to the constructivist perspective (Kimmerle, Moskaliuk, Oeberst & Cress, 2015), assist the cognitive processes and, therefore, improve learning. Studies in the field highlight the fact that FB enhances language learning in higher education (Troussas, Virvou, Caro & Espinosa, 2013; Bailey, Park, & Haji, 2017; Cook & al., 2008; Stanca & Felea, 2016), it increases interest (Jones & Shao, 2011) and offers an alternative channel for practising English outside of the class. According to other studies, FB is likely to increase homework (Kitsis, 2008) and Teacher-Student interaction (Godwin-Jones, 2008; Sturgeon & Walker, 2009), to improve language learning skills (Depew, 2011 as cited in Aydin, 2014, p.157), especially writing, and to develop competition (Shahrokni, 2009). Another study reported superior results in the English proficiency test by an experimental group who had received FB motivation and engagement versus the control group who benefitted only from face to face instruction (Wamba & Carter, 2016). To our best knowledge, there has been no study on using FB to integrate asynchronous speaking in Medical English so far.

## 2. FB-integrated professional Medical English communication

As other virtual learning platforms, FB groups offer facilities for delivery of materials and monitoring communication: files, statistics about top posts, interactions in a specified period, top collaborators. Nevertheless, FB, as the other social media, was not designed for learning purposes. Unlike Moodle or Edmodo (Edmodo.com), for example, FB groups do not offer users the possibility to filter posts, to grade assignments and thus monitor student progress. If logistically, commenting with a video was a plus for our blended learning format and focus on speaking, the impossibility to download

the students' videos for evaluation and research purposes was another major FB impediment. Still, social media (WhatsApp, Facebook groups), besides being already familiar environments, responded better than e-mail to the need of staying in touch, polling, and providing effective feedback to our dentistry students in Medical English (Pop, 2018b). In contrast to educationally-designed platforms such as Edmodo and Wikipedia that we had previously used for delivering asynchronous professionally-oriented English communication, the students' rate of response to informal communication was considerably higher in FB as students seemed to be always present, liking, commenting and sharing (Pop, 2018b). This familiarity, as well as the students' positive attitude and availability to communicate prompted us to adopt and adapt FB as a learning environment, a platform for written and oral professionally-oriented asynchronous communication with General Medicine students.

The objective of this study is to contribute to the discussion of the role of social media in ESP learning, precisely how FB can be customised to provide asynchronous practice and communication opportunities in Medical English and with what results. I will detail on several professionally-relevant speaking tasks in English for Medical Purposes, starting from its two basic challenges: acquisition of the new medical lexicon and speaking to peers and patients, the latter representing the most important productive skill associated with high levels of anxiety. Speaking in front of an audience is usually anxiety-provoking, a reality that was even more acute since students spoke in large mixed- ability groups. Class speaking was fraught with the inconvenience of non-democratic participation, oftentimes the shy, low-proficiency students tending to cease floor in favour of higher achievers. FB asynchronous speaking was then proposed as an anxiety-coping alternative to class speaking with the assumption that FB as a familiar, less teacher-controlled medium, would lead to higher confidence through autonomous preparation and subsequent revisions which asynchrony allows.

The theoretical basis of this action research was represented by the constructivist, cooperative, active language learning (Piaget, 1971; Vygotsky, in Liu & Mathews, 2005; Bruner, 1961), and web- based learning theories (O'Neil & Perez, 2008). Collaborate, create and share are basic tenets in language learning (Lomicka & Lord, 2009) and these are exactly what FB offers: language in interaction, learners being engaged in meaningful, pragmatically-appropriate everyday communication while creating and sharing their communication products.

*Method*: Although this is an empirical study, we will not reproduce all the research methodology and findings, but will focus on essential outcomes in order to demonstrate the effectiveness of this approach. Data were collected through online class observation, evaluation rubric of FB asynchronous speaking, a four-item questionnaire assessing the students' "satisfaction" and "usefulness" of FB tasks, and two cycles of informal class discussions (at the end of the first and during the second semester, respectively) in order to obtain qualitative data related to the students' experiences. The qualitative components of the questionnaire and informal class discussions focused on challenges, benefits and amendments of the FB-based ME speaking, students answering questions like: *How do you feel when recording? How much time do you usually spend on an assignment besides the recording? What have you learnt from this experience? Would you like to continue these activities next year? Why? /Why not?*

Motivation was measured as the degree of students' involvement through the number and length of recordings (maximised language use), commenting, and expressing attitude ("likes"). The study

adheres to the ethical desiderata of academic research including identity protection and volunteer participation.

### *2.1. Participants*

During the 2018-2019 academic year, a group of 91 first year students from the General Medicine programme at the local public university were invited to participate in the study. Students were taking the ME course which counted as 2 ECTS credits. The course syllabus focuses on medical terminology related to the main human body systems and associated diseases, as well as introduction to doctor-patient communication. The format is a four-semester two-hour/week practical course in large mixed ability groups (25-40/B1-C1 students) and end-of-year colloquium as summative evaluation. Besides the contact hours, the credit system presupposes student preparation and involvement in projects and other out of class assignments/tasks as basis for their continuous evaluation. To this purpose, we chose Facebook groups as a delivery and activity platform for the blended learning format, the optional assignments targeting mostly speaking for medical purposes and self-reflection. Overall, the task-based approach (Ellis, 2000) consisted of two writing and three speaking assignments during the first year, contributing up to 30% to the summative evaluation. This action research intervention targeted the consolidation of students' medical vocabulary, the increase of their self-confidence and decrease of anxiety in speaking by using a familiar medium for professional communication purposes.

## **3. Asynchronous FB-based writing (W) for ME**

Since writing is collateral to the expressed scope of this paper, we will just briefly summarize the two writing tasks (W1 and W2) of the FB blended learning format. W1 - *A neurological condition - Peer versus doctor-patient communication* required students to explain one neurologic disease either to a colleague or to a patient, stressing the distinction between common language (patient-speak) versus medical jargon (med-speak). W1 results: 60 paragraph-comments, e.g.:

(1) (patient-speak): *Your condition is called in clinical terms "Myasthenia gravis". In short, it will affect your capacity of moving and perceiving the space…..It is an extremely severe disease. Unfortunately, you will slowly lose control on your muscles, daily activities becoming almost impossible tasks. There is no treatment, you will have to live with those symptoms, but, at least, you have no other psychiatric problems.* (SM)

(2) (med-speak): *Alzheimer's disease is a degenerative condition of the nervous cells, which usually affects the elderly and causes short-term memory loss. The main factors causing the Alzheimer's disease are still debated, but current studies showed that it is related to a stressful lifestyle, a poor diet, and it appears more and more frequently among diabetic patients. The disease affects the grey substance of the cerebrum and triggers changes in the cortex that lead to neurons' death. The brain's grooves become enlarged, leading to a poor neuronal connection and eventually to severe memory loss.* (AM)

In the second semester, W2 – *Reflection for learning awareness* –was broader in scope as it invited the students to reflect on their learning experiences in Medical English while focusing on argumentation, paragraph structure, and providing feedback on the effectiveness of the ME learning approach, materials, and strategy. W2 results: 73 paragraph comments, e.g.: *I've discovered a very constructive and useful part of this language, the Medical English. I really love attending classes because I find them very helpful and relaxing. Moreover, I think that learning medical terminology such*

*as diseases, parts of the body, systems, etc. and speaking about them on the FB platform will help us to develop a proper communication as future doctors. Medical English prepares us to communicate with both the patients and the medical staff in an international context* (IA).

## 4. Speaking (S) asynchronously for Medical Purposes

Asynchronous speaking was given top priority in the FB tasks since speaking represents the crucial productive skill in the medical field and the object of the current research. The nature of the future doctors' speaking (Pop, 2016; Pop, 2018a; Mărginean, Pop & Martellini, 2018) includes speaking to peers, healthcare staff, and patients. Of these, FB-based asynchronous activities targeted speaking to peers (med-speak) or patients (patient-speak) under the form of a monologue and speaking to patients (employment of common language and avoidance of medical jargon) under the form of a doctor-patient dialogue. Tasks also relied on the power of reflection as key for understanding new communicative experiences and improving.

### *4.1.* Speaking assignment one (*S1) - Interesting facts about a system, organ or disease*

(S1) was a monologue following the precepts of public speaking (convincing message, organization – opening, structuring and summarizing – pace, loudness, etc.). Students had to select some interesting, less known facts about an organ, a system, a disease and make a 1.5-2-minute presentation having a real audience in mind, convincing them about the importance and novelty of the topic. When satisfied with their results, students recorded and then uploaded their mini-presentations on the FB group.

### *4.2. S2 Self and Peer-Reflection*

Reflection is a key element in transformative learning. S2 - *Reflection on my speaking* (i.e. on S1) was a self- and/or peer-reflection monologue which required students to examine the way in which they had performed in S1 and to suggest improvements. It invited a detached, critical examination, the possibility to contemplate and assess oneself against the peers' performance. Reference components included grammar and pronunciation, the take away message (content), any concerns about a particular aspect, and expectations.

### *4.3. S3 Dialogue with a patient*

S 3 took FB asynchronous speaking to the next level, that of interacting with a real audience (patient only and/or another family member) that involved peer learning and support. The task was a Doctor-patient role play which implied the students' documentation, practising several times, and recording. Body language, use of gestures, tone of voice, and smiling, were further precepts of staging the dialogue. E.g. of roles:

*Doctor:* Explain to the patient in simple terms his/her disease and answer their question/s. Speak about life style and medication, if necessary.
*Patient:* Ask one or two questions to understand your condition and what you have to do. *Model: And what do I have to do? How severe is it?*
*Family member* (optional) in the case of pediatrician - child-patient communication.

Students had to anticipate types of questions, details of their condition, whether the disease was curable, whether treatment would impede on their routines, how it would affect their future life quality (sports, marriage), check-ups, etc. Example:

*Case 1*: Type I diabetes: Doctor comforts patient and answers patient's questions on: *How could this happen? What do I have to do?* – recorded time: 2.35 min;

*Case 2*: Irritable bowel syndrome; Patient hard to accept restrictions; Doctor makes frequent breaks; checks understanding and summarizes – recorded time: 2.10 min.

## 5. Results and Discussion

There were 78 comments in ***S1*** – 50 videos and 28 written comments providing valuable teacher and peer feedback. The recorded time ranged between 40 seconds and 4 minutes (mean 1.92 min) with most presentations in the 1.5-2 min interval. The total asynchronous speaking time was 96.15 min, equivalent with $1^{1/2}$ hours extension of the total students' speaking time (SST). Topics covered the cardiovascular system (heart, blood - 7), nervous system (the brain - 10), diseases (bipolar disorders, diabetes, anaemia, cancer, autism, Alzheimer's disease, myasthenia gravis - 25), organs (eyes, ears, liver, muscles - 5), and other rare conditions (Alice in Wonderland syndrome, transplantations, etc. 3).

Quantitatively, the 48 self- or peer-reflection videos in ***S2*** amounted to 62 minutes (ranging between 40 sec – 1.20 min). In terms of content, they included aspects students would have liked to improve (better pronunciation, fluency), appreciations (content and attitude) and encouragements, different considerations on the take away messages. All of the reflections were positive, none of them pointing out to mistakes, shortcomings or other evaluative/negative aspects.

Forty-four students (48.36%) engaged in ***S3*** in pairs or threes (20 dialogues) demonstrating several strategies of doctor-patient communication in a total SST of 93 minutes (i.e. one hour and a half, ranging between 1.54 -3.02 min, mean recording time = 2.11 min).

The rubric-based evaluation of the speaking tasks by the teacher assessed task completion, expression quality, and complexity including the following variables:

*Content organization*: opening, ideas/arguments, conclusion, transition (cohesive devices/signposting);

*Language fluency and accuracy, pronunciation of medical terms*;

*Delivery:* eye contact (full eye contact versus looking at the notes), volume/clarity and expression (clear speech, strong volume and expression versus soft and difficult to hear speech), body language (hand gestures and relaxed position versus no gesture and signs of restlessness), and confidence (enthusiastic versus shy and nervous, no audience engagement).

### *5.1. The comfort of asynchrony and democratic participation in ME speaking. Analysis of student productions*

The overall STT in the three speaking tasks corresponded to an extension of professional communication by 4 hours, equivalent to two more weeks of full-time class activity. Most of the students created and listened to at least two other presentations (all had above two comments and emoticons). There were several high-quality presentations, based on sound scientific documentation with videos that employed multimedia effects (e.g. Kinemaster, Videoshow, Vivavideo, Movavi).

The online class observation assessed the students' involvement in terms of: active participation versus lurking, student-generated content, quantity and quality of feedback to posts and comments. Asynchronous speaking was qualitatively superior as delivery to impromptu class speaking. Besides using a familiar medium of communication, having a real audience in mind, listening to a teacher tutorial, and rehearsing were strategies that helped students to surpass the initial strange feeling of listening to their own recorded voices. Even lower proficiency students engaged and controlled at least one aspect of their performance (content, pace, tone of voice, loudness, or body language). Students preferred individual speaking contributions, role-plays being more time consuming and difficult to organize. In all the speaking tasks there were students who assumed a passive role, lurking being evident from the numbers of "seen by" versus the number of comments. As obvious from class group discussions, these were either technophobic or had other extracurricular family/health commitments.

### *5.2. Further quantitative and qualitative outcomes*

Students' opinions on "usefulness" and overall "satisfaction" of this approach to ME communication were assessed through a simple 4-item questionnaire: two four-item Likert scale (extremely useful, useful, useful to a certain extent, not useful), e.g. *Rate your satisfaction with the FB communication*. Two open-ended questions invited students to provide details/reasons for choosing the respective levels. The questionnaire was administered online via Google forms at the end of the second semester, 41 students completing the questionnaire. In terms of "usefulness", the results were: 10 (24.39%) extremely useful; 29 (70.73%) useful; 2 (4,88%) useful to a certain extent. As to the overall "satisfaction" with FB speaking the results were: 1 student (2.44%) not satisfied, 9 (21.95%) satisfied to a certain extent, 21 (51.22%) satisfied, and 10 (24.39%) extremely satisfied.

The qualitative data from all instruments: asynchronous written (W2) and oral reflections (S2), peer feedback and ancillary generated content, as well as the two cycles of informal class discussions and the two open-ended interview questions were analysed using content analysis. Themes that occurred more than 3 times were considered relevant. The major reasons students provided were mainly cognitive and affective: *positive cognition* – e.g.: extended time for preparation, revision and therefore increased confidence in speaking; *negative affective* - difficulty talking in front of the camera – which, however, once surpassed becomes attractive, useful, and memorable. As to limitations, we need to mention that not all students who engaged in the FB-based communication filled in the questionnaire, but all those who answered had completed all the three speaking assignments.

Downsides were also assessed by comparing posts and comments to social interaction. Several written comments were short, resembled text messages, and used punctuation sparingly – a negative influence of social media on writing. This could be a signal that due to the speed of communication, FB might side-track students to less academic, abbreviated writing. Although social interaction was limited when compared to task contributions, there was an impressive amount of student generated content related to the studied topics (e.g. links and comments on movies on medical conditions, such as Alzheimer's).

Regarding the type of peer feedback, the emoticons - the *smiley faces*, well done and *thumbs up* - demonstrated that students had listened to their peers' presentations and provided their emotional encouragements that relaxed the virtual classroom. While in the informal class discussions students focused on the fear/reluctance of listening to their own voices (asynchronous speaking anxiety), in the

recorded reflections they tended to focus on speaking inhibitors: personality (shy), lack of self-confidence due to low proficiency, limited vocabulary, fear of negative evaluation and face loss. Moreover, S2 reflections were positive and frequently took the form of testimonials – (e.g. *I learnt from Student X that*….) which indicates that public peer-reflection is not the ideal pathway to evaluation and students did not feel comfortable to correct their peers. They considered creation and sharing to be more important than accuracy while online identity and face saving were key pragmatic elements of their online community that transcended the pre-established evaluative goals.

## 6. Conclusions

FB can represent a valid venue for supplementary asynchronous professional communication in Medical English. This study replicates others in the literature reporting on the positive effect of FB on higher education students' motivation (Lampe, Ellison, and Steinfield, 2008; McCarthy, 2012; O'Sullivan, Hunt & Lippert, 2004; Terantino & Graf, 2011), while bringing further data on the positive impact of Facebook on asynchronous speaking for Medical English. Specifically, FB-based learning accrued the ME speaking in terms of extended SST and quality of delivery in oral presentations, students evaluating this experience positively in terms of satisfaction and perceived usefulness.

The two basic contentions of this paper related to both quantitative and qualitative findings can be expressed as:

- FB asynchronous tasks can be effectively customized for ME speaking with significant increase in the total SST (over four hours/year) besides the enhanced time spent by students in a ME speaking medium through listening to peers and commenting. More students than would have ever been possible in the class time participated in the FB speaking tasks that targeted communication with peers and patients. I called this quantitative finding "democratic participation";
- focus on technology, using a familiar platform, and recurrent asynchronous FB speaking geared the students emotionally, functioning as anxiety-coping strategies. I called this qualitative finding "the comfort of asynchrony": once the students surpassed the initial reluctance of listening to their own recorded voices, asynchronous speaking worked as an anxiety-decreasing and confidence-increasing strategy. The students' productions were also noticeably qualitatively superior to class speaking, each student being able to control and improve at least one or several elements in their mini-presentations (pronunciation, gestures, tone, voice quality, etc.).

To these, I should add the students' positive opinions about satisfaction and usefulness of asynchronous FB speaking for cognitive reasons, but also their expressions of appreciation and encouragement under the form of written comments and socio-emotional messages – likes, emoticons – contributing to enhanced confidence.

A limited social interaction pertaining to the demanding professional communication tasks, the initial technophobia, and saving face in peer evaluation rather than sticking to the pre-set evaluative goals were some of the challenges of asynchronous FB speaking. As future amendments, I also need to encourage increased group cohesion and expansion of student-to-student communication. Finally, as the study is currently in the second year of ME, more quantitative data will be added to confirm these partial conclusions.

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