

Self-Access Learning in Medical English (ME)

A Two-Year Edmodo Project

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Abstract. Individual learning is a pre-requisite of formal ME credit allocation in higher education (HE), albeit this may be hard to document and quantify. Edmodo-enhanced self-access learning can be customized to accommodate different learning styles, form basic learning skills and field-specific subskills, extend and expand the students' medical language use, while also meeting the desiderata of independent curriculum-stipulated learning that can thus be exploited and demonstrated. The paper will reflect on the design of ME multimedia assignments as well as the quantitative and qualitative results, motivation and attitude of a group of medical students working on Edmodo self-access ME learning as part of a class research project for two years.

Keywords: Edmodo, medical English, self-access, virtual poster

1. Edmodo in language learning

Founded in 2008, with over 66 million users in 2016, Edmodo is a safe, online learning platform, which has gained an increased popularity especially in the context of English language learning due to its support of student engagement and motivation, self-direction and collaborative learning, with communication as the key envisaged competence. Results in the literature demonstrate that Edmodo is a robust path towards extending responsible learning environments beyond the classroom, remodelling and redefining the ways in which students actively participate in their learning (Patel 2017, Balasubramaniana 2014, Gushiken 2013, Enriquez 2014, Muilenburg 2011).

Many educational institutions are using Edmodo in their language teaching and learning “in a way that not only exploits existing models, but additionally

acts as a catalyst and a force for change, allowing students to more actively participate in their own learning” (Patel 2017).

Edmodo has been used in collaborative language learning between university students across countries, facilitating the engagement of Japanese and American students in learning Japanese (USA students) and English (Japanese students) respectively, with positive feedbacks from both students and teachers, the latter appreciating the global connection and the importance of communication with native speakers for foreign language learning (Okumura 2016).

According to Thongmak (2013), Edmodo is an effective classroom collaboration tool that can contribute to distance teaching, whereas Al-Kathiri (2015) noted that Saudi Arabian secondary students who used Edmodo had more positive attitudes towards learning English as a Foreign Language (EFL) than those who only received traditional EFL lessons.

Statistically significant motivation towards EFL language learning and enhanced teacher–student interaction due to the use of Edmodo was also reported in Saudi Arabian higher education (Alshawhi 2016), whereas Asmuni (2015) demonstrated in an Indonesian context that the use of Edmodo influenced student participation in class discussions on theoretical and practical teaching materials.

Besides facilitating peer learning, Edmodo supports project-based learning that, in turn, encourages self-directed development by offering students more agency, having them contact the teacher and each other when they have questions about assignments, homework, and tests (Poth 2017).

Edmodo is, therefore, a flexible platform that allows students to connect and communicate with one another in engaging and motivating ways beyond the contact hours, with new features being constantly added, such as the latest ones: threaded replies, tagging (i.e. notifying students when replying to them), adding attachments to replies, and instant translations in case of unknown words or expressions.

Although the use of Edmodo-based language learning is already a gold standard in many countries, it is still perceived as innovative in Europe, whereas in Romania the Edmodo virtual learning project in medical English presented below represents a pioneering enterprise.

2. Project background

Formation of medical English skills for communication in an international environment reaches far beyond the formal syllabus and limitations of the envisaged formal higher education (HE) foreign language curriculum, with self-access learning representing just one option towards this goal (Chiu 2012, White 2011).

Different technology affordances (Edmodo virtual learning platform, writing tools: Smore, cell phone recordings, Google docs) have been harnessed as part of an optional project-based small-scale research with a group of medical students in order to empower them towards a more autonomous, continuous but also meaningful ME learning.

The aim of the self-access project was to enable learning to take place outside the contact hours, extend student exposure to ME as well as the use of ME, and form especially those skills which take longer time to develop, e.g. writing. The project was also expected to offer a better mapping and transparency of students' individual ME learning that would be reflected in the final evaluation, too.

3. Material and methods

Five groups of first-year medicine students of the University of Medicine and Pharmacy (academic year 2014–15) and the same groups (minus one, due to group redistribution among the teachers) in the second year (academic year 2015–16) were exposed to optional working on the Edmodo virtual platform (Medical English group), with integration of skills.

The study surveys the design and outcomes of self-access ME learning through examination of task design elements and students' productions (i.e. quantitative and qualitative) and measures students' motivation (i.e. degree of involvement) and attitude (questionnaire-based).

3.1. Platform presentation

Edmodo is a free virtual learning platform (www.edmodo.com) which offers a large range of learning management facilities, including: setting up assignments with deadlines, polls, quizzes, post-filtering, integration of audio and written files, notifications, embedding and sharing posts and comments with individual/group members by making them public, to mention just a few. Groups and subgroups can be easily established, which enables task differentiation on desired levels of proficiency







 Diana Iurian	97%	10 / 10		10 / 10		10 / 10
 Astrid Jerca						
 Anamaria Jugariu	80%	10 / 10	Turned In	9 / 10	3 / 5	9 / 10
 Alin Juhas	81%	9 / 10			3 / 5	8 / 10
 Timea Katona	81%	10 / 10	Turned In			9.5 / 10
 Ana-Maria-Roxana K...	88%	8 / 10	9 / 10	9 / 10	3 / 5	9.5 / 10

Figure 1. Instant monitoring of student contributions in Edmodo

but also collaboration outside the institution and even outside the country borders. Materials for class use and links provided in the platform library facilitate students' access to paperless resources, while teachers can view progress reports (Fig. 1) and make certain contributions public, which are extremely valuable features.

4. Designing meaningful multimedia assignments

ME assignments which form the object of analysis in this paper were expected to contribute to the formation of the writing skill and professional subskills such as:

- a) virtual poster presentation (*Smore*) including peer-reflection and feedback (A1);
- b) communicating bad news, including peer-review (A2);
- c) conducting a survey on local health aspects and writing a mini-research paper (A3).

The data in this paper will be based on the examination of these three assignments.

A1 – Virtual Posters. Classic poster writing and presentation represents one of the basic communication subskills in the medical profession. Poster presentation is part of the physicians' research and continuous formation and updating through participation in international events. Forming this subskill in the ME class is one aspect of accomplishing the students' academic writing competence envisaged by the medical syllabus. Poster writing was teacher-modelled and the elements of content (images, links, video) and language (overall structure, paragraph quality, language) synthesised and communicated to students. Students produced 28 posters of various lengths (1 to 6 pages of text and image) and content that were embedded in Edmodo. The topics covered common conditions of students' expressed choices (Down syndrome, diabetes, future of transplantation, acne, bioprinting, cardiac arrest, baby brain development, in vitro fertilization), more advanced interests (hyperthymesia, amyotrophic lateral sclerosis), and original advertising for local events in the medical field (advertising – improve your medical skills, Medshop opening).

Unlike in the case of paper poster format, students personalized their virtual poster with multimedia presentations and personal voice recordings, the latter offering a more faithful picture of their preparation and linguistic competence, translated into warmth and immediacy, which only direct, oral communication offers (Fig. 2).

Besides providing extra writing practice, by writing in the public space, students' ideas were open to a larger audience. This openness made writing a more communicative and therefore meaningful activity. Moreover, the stipulated requirement that each poster have a peer reflection element also opened the poster to the public, some posters receiving positive feedbacks even from people outside the class (Fig. 3), which stressed the importance of self- and peer-reflection in quality ME learning.

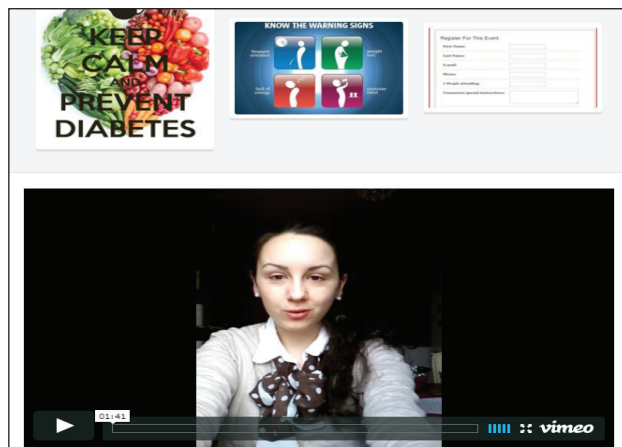


Figure 2. Original video element in virtual posters by Ilisiu A.



Figure 3. Peer-reflection in virtual poster public writing with Smore

A2 – *Communicating bad news* was practised through a case study and on peer-review basis, thus targeting meaningful writing communication and the formation of the critical thinking subskill.

Case study example:

You have a patient who has been diagnosed with malignant adenocarcinoma of the pancreas. You know the prognosis is bad. In one paragraph, give the bad news to the patient.

Six answers were selected for different reasons, such as the use of medical jargon, lack of empathy and tact or unrealistic approximations, and made public for peer-review awareness raising and development of critical thinking skills (e.g. answers _{a,b,c} below):

A_a: Good afternoon, Mr. P. I have very bad news for you. Unfortunately, you've been diagnosed with adenocarcinoma, the malignant one, which is the worst thing we didn't want to expect. Of course, there were some cases where patients had succeeded to surpass the disease with radiotherapy and other methods, but only in a small percentage of the cases. In the majority of the cases the disease prognosis is of a few years of survival. I'm sorry.

A_b: Hello, Mister! Take a seat, please. I have received your results and I think we have to discuss seriously about them. The prognosis isn't very good but I think we can try to figure out our next step. You have two options: live in peace those months that you still have or we can try some new experimental treatments. Please go home and consider it carefully.

A_c: I'm afraid the tests came out positive for adenocarcinoma of the pancreas. There is no cure for this and unfortunately, you have only three months to live. I am being honest with you and I think during this time you should spend as much time as possible with your loved ones. I'm sorry.

Based on class readings and discussions on giving bad news, students are requested to identify communication appropriacy as well as barriers in the doctor's messages (e.g. peer-reviews below):

I think that answer 5 is a little too positive, it doesn't point out clearly enough the situation to the patient: that he has a very serious disease and that the prognosis is bad even though his other organs are in perfect

shape. Answer 4 is too harsh, the fact that there is no cure doesn't mean that the patient should not know about other type[s] of treatments even if the chance of prolonging his life is slim, this also applies to answer 3 where the phrase: "which is really bad" is not the appropriate one. (Gusul M.)

A3. Survey on local health – the main objective of this writing task was to evaluate the need for medical training and awareness among the local population about general medical aspects, including: knowledge of their own blood group/Rh, blood pressure, cholesterol level, glycaemia, allergies, etc. A 21-item questionnaire was distributed by each of the participating students in the surveyee's mother tongue (i.e. Romanian or Hungarian) to at least 10 people in the area. Results were collected, interpreted, and synthesised under a research paper format including an abstract, discussions, the graphic representation of two statistical results, and conclusions. The technical aspects of writing a research paper represented the pedagogical focus of this self-access task but also the formation of research (conducting an interview, discussing results, drawing conclusions) and linguistic (translation into English) subskills.

5. Results

The overall self-access ME Edmodo output was materialized in:

1. 9 optional, graded assignments, i.e. about 4/year;
2. non-graded assignments likely to help students master the vocabulary items and grammar structures and facilitate inter-group communication:
 - 4 Edmodo-generated quizzes/year;
 - a huge amount of informal teacher–student, student–student communication, reflections (SurveyMonkey), comments, and random polls.

Of the participating students, over 50% contributed between 75–100% of the assignments and 32% \geq 50%. Although it is difficult to estimate the whole amount of informal communication that took place during the two years, statistics showed that the self-access ME communication with Edmodo enabled a student to extend his/her ME input by about 14 hours of reading, writing, speaking, and preparing for Edmodo assignments, i.e. half the contact hours during a semester.

Moreover, the quantitative and qualitative analysis of students' contributions to the surveyed assignments reveals that self-access ME learning with Edmodo has positive outcomes in terms of:

1. *error correction (EC)*; EC becomes a staged and multi-modal (written and oral) process starting with self-correction, revision, and feedback and ending with teacher correction (Fig. 4).

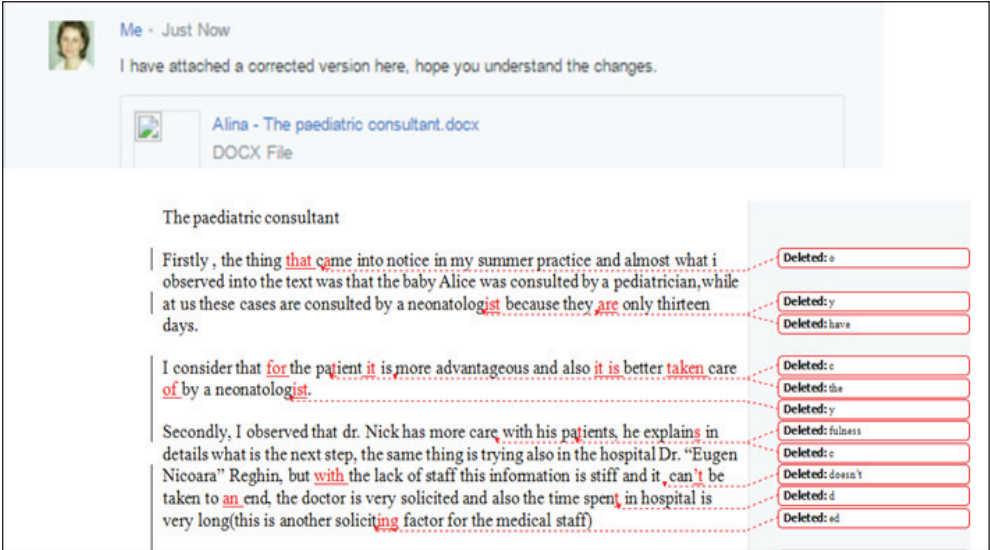


Figure 4. Second stage – written EC

Written EC was preferred in cases of poorer writing productions as it is more tangible and accurate, whereas recorded feedback was given to students with higher writing quality since they needed fewer corrective interventions. Oral recorded feedback also reinforced teacher presence and closeness, likely to humanize the virtual environment. Multi-feedback has optimized students’ productions in terms of quality through continuous feedbacks from the teacher (both written and oral) and successive revisions, thus becoming a component of a more formative rather than summative assessment. As such, many written productions passed through several revisions, and there was no case of requested resubmission by the teacher, students usually deciding when an optimum level of accuracy and content appropriacy had been attained.

2. *student motivation* was measured as the degree of involvement in the self-access optional activities. About 70% of the students contributed in various degrees to the self-access Edmodo activities (see *Table 1* below):

Table 1. Overall assignment statistics

Assignment	Type of task/skills, subskills	Turned in and graded
Giving bad news (A2)	Writing/peer-reflection, communicating bad news	14
Virtual posters (A1)	Writing & speaking/peer-reflection, summarizing	28

Assignment	Type of task/skills, subskills	Turned in and graded
Reading on the impact of sugar consumption	Reading/expressing opinions, awareness raising	27
Listen to the patient – he might be telling you the diagnosis	Speaking/empathetic listening	44
A week in the life of a hospital (writing on the summer practice)	Reading and writing, compare and contrast	41
Survey on local health aspects (A3)	Writing/conducting a survey, summarizing, writing a mini-research paper	68
Clown care – the children's ward	Listening/speaking	26
TED lessons from Harvard	Listening for gist	71
A doctor's personal traits	Expressing opinions, self-reflection	67

3. *attitude* to self-access Edmodo-based ME learning was evaluated with a ten-item SurveyMonkey questionnaire. Results show that students preferred listening and speaking and almost in equal proportion reading and writing. About 74% of the students were satisfied (52.94%) or extremely satisfied (20.59%) with working on Edmodo (Fig. 5).

Answer Choices	Responses
Extremely satisfied	20.59%
Satisfied	52.94%
Neutral	20.59%
Satisfied only to a certain degree	5.88%
Not satisfied at all	0.00%
Total	

Figure 5. *Student satisfaction with working on self-access ME Edmodo assignments*

After content analysis and coding of students' responses, the following categories of reasons for choosing to contribute to the project recurred the most

frequently: flexibility of access, interactivity, editability, and capacity to optimize input as well as contribution in different proportions to the final grade during the semester:

(1) I am extremely satisfied with this method because I have all the materials that I need on the platform. I also liked very much the quizzes and the idea of recording myself and uploading the recording on the platform.

(2) This method seems interesting and interactive. Usually students are less attracted to courses in which they sit and write or listen to a presentation. The work platform makes us think and interact more.

Eighty percent of the surveyed students would recommend learning with Edmodo to others. Answers to “neutral” and “useful to a certain extent” were also important, and they included aspects pertaining to time management and failure to meet the deadlines:

(1) In my opinion, the deadlines are a drawback because we cannot always find the time to complete the assignments.

(2) While I agree that in some cases it is easier to submit assignments to this platform, I find that a very common problem is remembering to check it regularly, which leads to finishing most of the work after the deadline.

Conclusions

Unless it is a casual enterprise, Edmodo-blended self-access benefits and supports ME learning. Provision of self-access materials and activities is learner-focused and likely to foster independent learning, meet variegated individual learning needs, and cover a larger array of learning styles than face-to-face learning alone would.

Moreover, self-access ME learning offers students flexibility and autonomy in terms of proficiency level, multimedia integration in paperless meaningful assignments followed by continuous asynchronous formative feedback from the teacher (oral and written), and contribution to the final grade.

Independent learning is also a requirement/component of the formal ME curriculum credit allocation. If this is generally difficult to quantify and teachers can only presume independent learning has occurred based on the results in the summative evaluation, we can entertain that self-access activities in virtual

platforms could be material evidence of student preparation and involvement as well as contribution to a more faithful evaluation. That such projects also reflect the teacher's continuous involvement and hard work in designing, constantly monitoring, evaluating, and grading remains an understatement, which can only be balanced by the students' engagement, satisfaction, and enhanced results.

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