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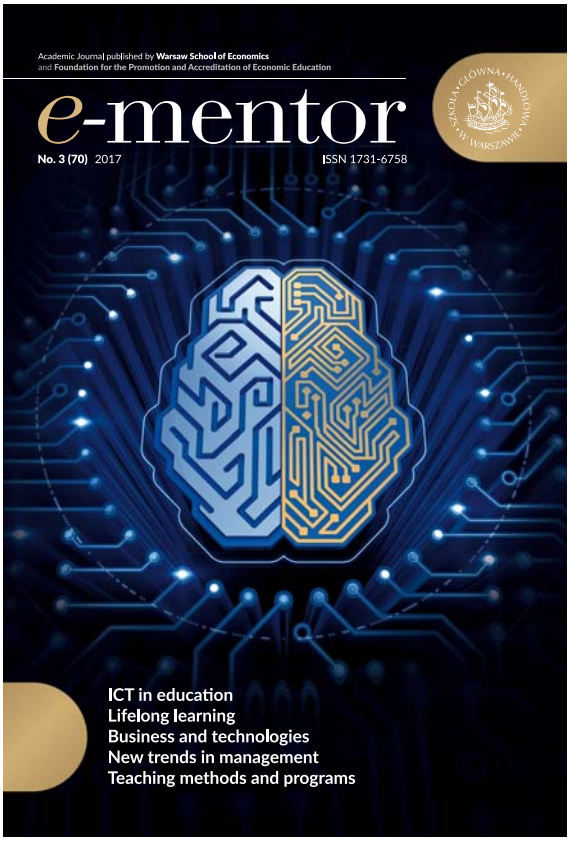

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ICT goes university. Three ideas and their implementations

Anna Turula

University education can truly be called up-to-date as long as there is coherence between the novelty of the technologies used and the modernity of the teaching philosophy, methods and techniques applied (Turula, 2014, pp. 45–63). This coherence can be best understood if we assume a non-reductionist approach to the mutual influences between technology and education (Turula, 2014, pp. 45–63, 2016, pp. 47–60).

Operating online in the digital world with its interconnections and flattened hierarchies, we should teach in ways that result in knowledge constructed in dialogue rather than transmitted from the teacher to the students. This implies education that is democratic (the hierarchies are flattened) and open (the walls of the university are thin; cf. Richardson & Mancabelli, 2011). At the same time it is important to emphasize that this influence of the digital (the interconnected world) on the educational is far from unidirectional. Dialogic education of unprecedented proportions and outreach capacity is possible owing to new technologies. Yet, at the same time, the teaching philosophy shapes the ICT context, by making us choose the environments and tools that best suit our pedagogical aims. Such shaping often goes beyond the mere choice of pedagogical means. The influence pedagogy exerts on new tech goes as far as the creative adaptation of available applications and their innovative affordancing. All in all, new technology and pedagogy should form a symbiotic relationship, ongoing and dynamic, adapting to the changing reality through the different facets of their mutual influence.

The three pedagogical solutions described in this article – blended tutoring, online intercultural exchanges and the flipped classroom – capitalize on the symbiosis between pedagogy and new technologies. The cornerstone of each is the previously mentioned belief that education should be dialogic and result in meaning construction rather than transmission. It should also make the walls of the university thin in the way described above, without time or place constraints, enabling encounters with people from different cultural backgrounds. Education of this kind should be carried out in a climate of trust, encouraging a free exchange of ideas and promoting critical thinking. This model of learning is called a community of inquiry (CoI) (Garrison et al., 1999), and rests on three different presences: the social (climate), the cognitive (critical thinking) and the teaching (efforts of the educator aimed insuring the first two presences). All three pedagogical solutions described aim at establishing such a CoI.

Firstly, these solutions stem from the assumption that while learning from and with other people, we need to intersperse *together* moments with *alone* moments. During the former, we bounce ideas off of other people and we have a kind of viewpoint rehearsal: we defend and maintain – or change – our opinions based on the lessons learned in ways much more complex and richer than when studying on our own. We also practice our discussion skills. When on our own, we have the time and the opportunity to reflect and to consult the relevant literature and other resources.

Secondly and equally importantly, the three pedagogical solutions presented are based on a conviction that learning should be facilitated as well as difficilitated. This means that while the role of the teacher is mainly about creating an environment that stimulates cognitive and social activities, it is also important that s/he plans tasks in a way that challenges the learners and pushes them out of their intellectual comfort zone. To fall back on the classics, this means the Socratic method, combining maieutics with elenctics.

The effective functioning of a modern CoI is reinforced by the use of new technologies. These technologies allow dialogue to cross various boundaries, by removing time and place constraints. They smoothly combine *together* and *alone* moments, by offering both CMC (computer mediated communication) and ACMC (asynchronous computer mediated communication) options, as well as by giving unlimited access to various resources. And finally, these technologies individualize education in ways unavailable to traditional schooling. As demonstrated in this article, the three pedagogical solutions described lead to the establishment of a CoI by using new technologies to offer dialogic learning, facilitated and difficilitated, and to interweave the collaborative with the individual.

Blended tutoring: Introduction

In its classic Oxbridge form, which is used as a model here, tutoring[1] boils down to an individualized academic education, based on a series of essays the student writes and discusses with their tutor during one-on-one, face-to-face (f2f) meetings. It aims to educate students by challenging them to evaluate sources and make connections across themes and disciplines (Moore, 1968), think critically and independently (Palfreyman, 2002), and express their opinions confidently (Beck, 2007, pp. 13–17). As the author of this article argues in another publication (Turula, 2017), the critical thinking and courage required to argue one's point are best developed if the traditional mode is reinforced by new technologies. If blended, modes lend their particular strengths to the task while also compensating for other modes' weaknesses. F2f meetings are better at promoting the social presence of the tutor/tutee's CoI: direct contact generates more spontaneous interaction and creates a climate in which attentive listening and verbal and non-verbal feedback are common. This aligns with earlier research showing that social presence – of both the tutor and tutee – benefits from communicative immediacy (Garrison, 2011) and interpersonal relationships (Vaughan, Cleveland-Innes, & Garrison, 2013). On the other hand, cognitive presence appears to be more intense online, probably owing to the asynchronicity of interaction (Garrison, 2011).

Blended tutoring, like traditional tutoring, requires a preparatory phase in which the foundations of a micro-CoI are laid. The phase starts by the tutor getting to know the tutee's interests, both personal and academic, to mark the social presence of both the teacher and the student and to delineate the path along which the tutorials will proceed. This is best done in a conversation that takes place during a meeting between the tutor and the tutee. This traditional mode can be digitally enhanced: the student may be asked to blog, to record a short introductory video (with the use of *Mailvu*, *present.me* or another application), or to create an online portfolio (e.g., in *Mahara*), in order to present themselves to the teacher.

Based on what is shared – and learned – in the course of these pre-tutoring actions, the tutor prepares a plan of action. This instructional design may follow the ADDIE model, where all sessions are planned ahead, executed and only then reflected upon. In such a case, rubrics – such as the ones devised by one of Poland's chief proponent of tutoring, *Collegium Vratislaviense* (Table 1) – may be a good solution.

If the tutor opts for a more *agile* way of instructional design, the rubrics may be filled as the individual tutorials proceed, not only with the topic of each essay but also with the reading list or general direction of the instruction chosen, based on negotiation between the parties involved. These negotiations can take place between meetings, in an *ad hoc* way, via email, or with the use of one of a wide number of digital tools normally used for brainstorming/stormwriting, storing, discussing and evaluating ideas (using *Padlet*, *Dotstorming*, *Conceptboard*, *Google Drive*, etc.).

Once it is clear what general topic an individual series of tutorials will revolve around, the student may start their work on the first essay; work, which – when in progress – is independent of the tutor. This is why it is important to make sure beforehand that the student is sufficiently developed in the area of search and information literacies. If necessary – based on what needs in this area we diagnose – a number of steps may be taken in the following:

Table 1. Tutoring rubrics

Tutor (name)			
Tutee (name)			
Area of knowledge			
Number and frequency of meetings			
Planned effects (knowledge)			
Planned effects (skills)			
Planned effects (attitudes)			
Reading list			
Tutorial 1	Outline of tutorial	Main questions	Topic of next essay
Tutorial …	Outline of tutorial	Main questions	Topic of next essay
Notes			

Source: Collegium Wratislaviense (DATE), cw.edu.pl; used with permission.

[1] This is called *supervision* at Cambridge University.

1. search strategies of the tutee may be broadened and/or refined;
2. *Google Scholar* search, with the use of the advanced functions the browser offers, can be recommended alongside regular online queries;
3. the benefits of setting up an account on *Academia.com*, *ResearchGate* or another site of this type can be pointed out to the tutee;
4. the ways of evaluating the quality of the publications found (number of citations; author's academic renown, the reputation of the journal, etc.) may be indicated.

Once the preparatory phase is closed, a series of tutorials can begin. In blended tutoring, it seems most appropriate to have the two modes, traditional and online, interspersed.

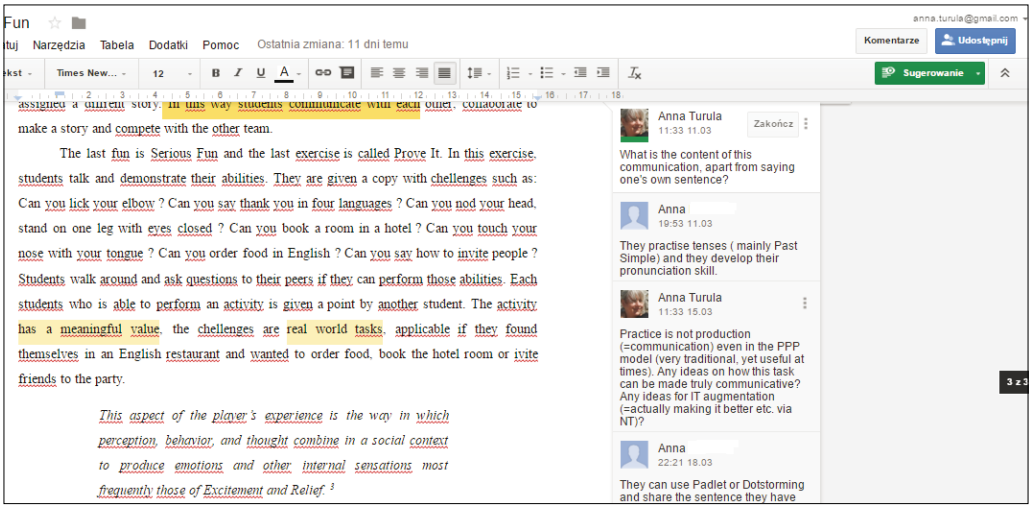
A traditional meeting between the tutor and the tutee lasts between 30-45 minutes. The time is more or less evenly allocated to two activities: reading the essay aloud (student) and a discussion of the work presented (student and teacher). During online tutorials, time constraints are not a factor (although it is good to limit the time of the on-essay interaction). The essay itself is shared with the tutor via the cloud (*Google Drive*, *Conceptboard* or one of the OS clouds: *iCloud*, *OneDrive*, etc.) and the ensuing discussion takes place asynchronously, with the use of the comment/reply-to-comment function.

Based on the tutoring experience of the author, there are a number of recommendations that need to be made with reference to both tutoring modes.

Starting with the traditional scheme, it is important to take care of the positive climate of the meetings in which the student feels safe to both read the essay aloud (this, at least initially, appears to be extremely stressful) and defend their point of view. This is why the challenges presented to the student, which are part and parcel of the method, should never involve too much pressure or confrontation. Techniques that are recommended here include scaffolding, modeling, prompting, active listening, co-generative dialogue, and frequent, active feedback (for more detail cf. Harris, Freeman, & Aerni, 2009, pp. 23–39; VanLehn, 2011, pp. 197–221; Cramp, 2011, pp. 113–124; Johnson & Harreld, 2012, pp. 361–378; Bashan & Hosblat, 2012). Additionally, the tutor should always remember that it is the student – and not the teacher – that is the central figure in each tutorial. This recommendation, applicable to both tutoring modes, is particularly important in the f2f meetings. The fact that they happen in real time and, as such, are more difficult to control, makes it more likely that the teacher will dominate the meeting both cognitively and in terms of talking time, especially if s/he generally has a certain propensity for being verbose (cf. Turula, 2017). This is why, when in the traditional tutoring mode, it is particularly important to operate within self-imposed limits. Such limits are more easily set if the tutor (i) reads the essay before the meeting, (ii) drafts a set of potential questions, and (iii) learns to tolerate silence that may follow the questions s/he asks.

In the online tutorial, one of the challenges is accounting for sensory deprivation. Where non-verbal communication (facial expressions, body language) aids communication during a direct tutoring session, the online meeting requires other skills and strategies. The two most important ones include (i) precision and clarity of communication (the questions asked need to be to the point and worded according to the intellectual discipline) and (ii) a kind of ambient awareness (a sense/ability to empathize, which helps the tutor identify cognitive problems that the student may face, as well as the student's true intentions). The latter is crucial considering the impoverished social presence that may make each side prone to reading too much into what has been written by the other ("the other party is rude/insensitive/etc."). The recommendation here is to try to always assume good will on the other side (unless you are 100% certain there is none). Another challenge, which may result from

Figure 1. An insight to an in-cloud tutorial



Source: own materials.

physical distance, is insufficient student motivation for participation or a tendency to procrastinate. The best course of action is to agree that the tutor asks their first questions as soon as the essay is shared, and that the first answers are due within 2–3 days; setting a time frame (e.g., two weeks) for work on a particular essay is also important.

Finally, in both tutoring modes, it is crucial to make the educational endeavor dialogic by asking the right questions and by asking them in a way that makes learning most effective. The Socratic method fulfills these two requirements. It combines the maieutics – the teacher as the midwife in the process of birth of knowledge, or the facilitator – with the elenctics – the teacher as someone who pushes the student out of their comfort zone, or the difficilitator. A sample of such a dialogue is presented below (Socratic questions underlined):

> ***Student:*** *I came up with an idea of a WebQuest: students choose an English-speaking country of their choice and for each class they are to prepare information about different spheres, for example food, education, geography, etc. They collect information during the whole semester and they present it at the end of the semester with a presentation about the country. Do you think that it would a good WebQuest?*
> ***Tutor:*** *The WebQuest you propose – it's potentially a good idea. However, there is a question to be answered: In what way will reading about all those different areas of life in a country be meaningful to the learners? Where is the real-life element? And pls don't get me wrong – real life does not need to have this pragmatic association (me buying a laptop). There are different (50 perhaps :-)) shades of meaning: people value learning as such; people want to be seen as knowledgeable; people are interested in cultures; etc. In what way will your WebQuest be meaningful? Can you make it even more real-life?*
> ***Student:*** *I've thought about your comments and I think that it would be a good idea to add telecollaboration. Just as we are doing. It could be risky, for various reasons, but it would be meaningful then, wouldn't it?*
> ***Tutor:*** *Telecollaboration is always worth including :-) The question would be: how, exactly, would you incorporate it into your WebQuest?*

Blended tutoring: Case study

Tutee (T) took part in a series of four tutorials held with each of the nine students participating in an MA seminar that was facilitated as part of the a teacher training program offered in the English Studies Department of the Pedagogical University in Krakow, Poland, between February and June, 2014. T was a 23-year-old woman, reflective, rather shy and not particularly eloquent. At the same time, she proved to be a very diligent student: no f2f tutorial was cancelled, and the online discussions were fluent and timely. T decided to concentrate on a relationship between gamifying a language course and student motivation for her MA thesis. A number of essay topics were suggested by the tutor via email, out of which two were chosen for the first two essays (topics 1 and 2); the other two (3 and 4) were the result of in-meeting negotiation between the teacher and the student (Table 2).

All four tutorials were recorded: the traditional meetings were audio-recorded and transcribed, and the written comments in Google Drive were saved to a separate document. Both provided research material for this research, whereby the following observations can be made (for a detailed discussion see Turula, forthcoming):

- The student's participation, in terms of word count, was much higher in the f2f meetings. However, when considered as a ratio of the total word count of the meetings, her proportional share of the dialogue was more substantial online.
- Being less verbose and more balanced in terms of teacher/student participation, the online tutorials appear to have led to more advanced levels of critical thinking.
- The social presence of both the tutor and tutee was more intense and more diverse in the traditional meeting.

Casual conversations with the student held during (especially towards the end of) each f2f tutorial also showed that T generally appreciated the f2f method. The one-on-one mode gave her the impression that the time was devoted to her exclusively; she also spoke favorably about the Socratic method. However, this method was also anxiety inducing for the tutee.

Table 2. Essay topics for Tutee (T)

Essay (tutorial mode)	Topic
Essay 1 (f2f)	Look at different theories of motivation (integrative/instrumental; intrinsic/extrinsic/goal theories) and decide which of them best explains motivation-building described in this article.
Essay 2 (e)	The concept of gamification and its influence on students' motivation.
Essay 3 (f2f)	Look at the goal theories of motivation (with special regard to achievement goals) and look for linking points between them and competency-based learning.
Essay 4 (e)	Look at the PERMA model or 4 keys to fun (links below) and decide how they relate to competency-based learning.

Source: own materials.

While she admitted the question mode of teacher-student interaction helped her continue and deepen her reasoning, it also left her with a feeling that she was not getting enough explicit feedback on her work. Consequently, she was unsure if the direction she had chosen was the right one and if she was making sufficient progress on her thesis.

Discussion

Based on the research results (Turula, 2017, forthcoming), as well as on the observations made during the author's 3-year experience with blended tutoring, the bended format is quite successful. It allows two modes – traditional and online – to complement each other. As mentioned previously, while f2f meetings create a climate of trust and build a personalized relationship between the teacher and student, the digital tutorials promote further reflection and critical thinking. This seems to be particularly important in the case of students like T – shy and rather silent – who, if exposed to f2f tutorials alone, might not have their fair share of dialogue.

In light of the above, the blended method is recommended as a method that helps facilitate and difficilitate an academic writing class through dialogue and that is effective in establishing cognitive and social presence in the micro-CoI formed by the tutor and his/her tutee(s). The way the method's essence (cf. Moore, 1968; Palfreyman 2002; Beck 2007, pp. 13–17) is translated into educational practice is enhanced with the use of new technologies: the hybrid format of the class interweaves the direct and online modes of tuition, which reinforce and supplement each other.

When it comes to student anxieties such as the one reported in the case study, they are probably the result of the educational culture the students are used to: the culture where the teacher has authority and control. Much as we might wish to reform this by encouraging more learner autonomy, we cannot ignore the apprehensions of students whose experience of academic independence is limited. This is why some steps need to be taken to accommodate the needs of the student. In response to T's concerns about her progress on her thesis, a reparatory scheme was devised. T was asked to select one essay from the pool of four she had written. This essay was subject to careful screening by the tutor and the content and form were given comments that contained evaluation and suggestions for improvement, rather than questions. This gave the student a sense of security because she had received detailed feedback on her written work pertaining to the standards set for a MA thesis by the university.

Online intercultural exchanges (OIEs): introduction

According to O'Dowd (2011), an online intercultural exchange (also called telecollaboration) is "the application of online communication tools to bring together classes of language learners in geographically distant locations to develop their foreign language skills and intercultural competence through collaborative tasks and project work" (p. 342), and is first and foremost aimed at "[the reflection] on [the students'] own culture or their stereotypical views of the target culture" (p. 344).

Task design is strongly emphasized in telecollaboration (Kurek & Müller-Hartmann, 2017, pp. 7–20). This is particularly important because, as noted by O'Dowd & Ware (2009, pp. 173–188), most online intercultural exchanges are task-based and observe the following task sequencing: information exchange, comparison and analysis, and collaboration. As O'Dowd and Ware (2009, p. 178) point out, this "combination of task types can expose learners gradually to different aspects of intercultural communication".

A good framework to rely on in task design is the one presented below (Kurek & Turula, 2013), following the task modes defined by O'Dowd and Ware (2009, pp. 173–188).

Examples of tasks and task sequences can be found

Table 3. Task sequencing in online intercultural exchanges

Stage Week (W)	Task	Tools	Type of task
Stage 1 W: 1–3	Group presentation	Prezi, SlideRocket, Glogster, Screencast-O-matic, PodOmatic	Information exchange
Stage 2a W: 4–5	First draft of pedagogical task	Blog, wiki, podcast, etc.	Creation of product
Stage 2b W: 6–7	Feedback on task from partnering group	Publishing tools	Comparison and analysis
Stage 2c W: 8–9	Task improvement based on feedback	Student choice	Creation of product
Stage 3 W: 10–11	Task execution (partnering group)	As in task	Creation of product
Stage 4 W: 12–13	Evaluation	Publishing/presentation tools	Comparison and analysis/creation of product

Source: Kurek and Turula (2013); used with permission.

in a number of publications and at uni-collaboration.eu (the *Tasks* tab), a webpage set up as part of the INTENT project, whose aim was to investigate and popularize telecollaboration (Figure 2).

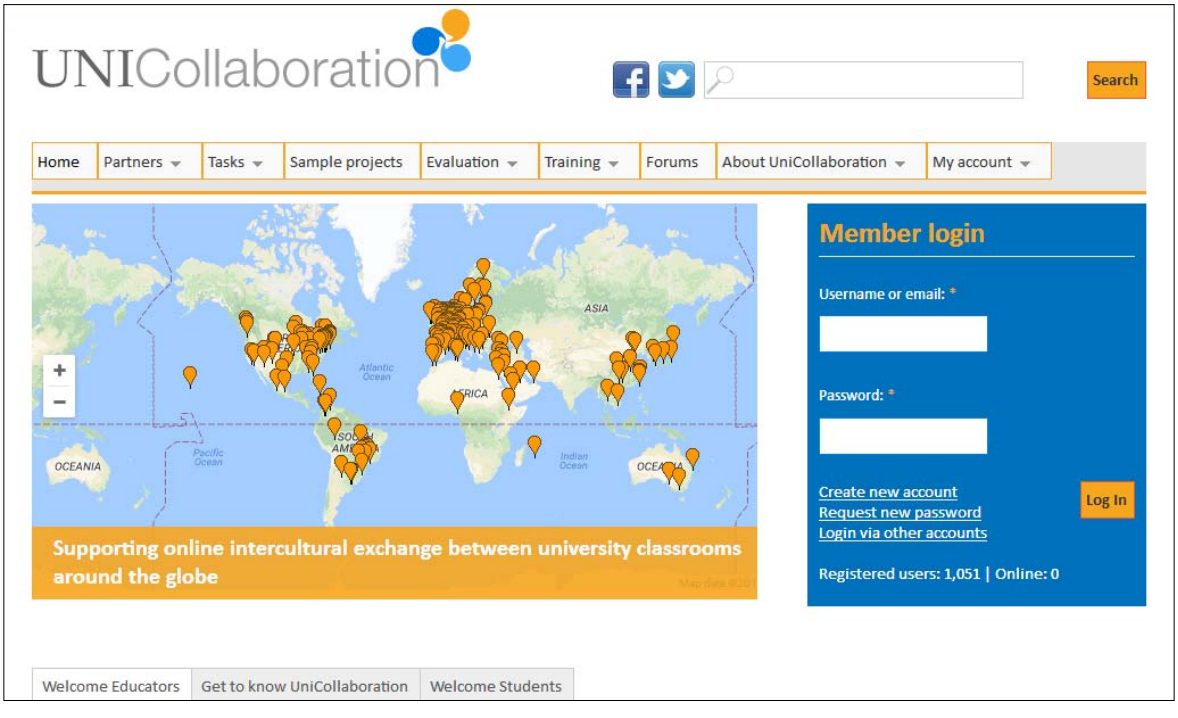
Apart from their focus on task design, teachers who wish to embark on an online intercultural exchange need to be aware of a number of factors.

Telecollaboration starts long before the students of the partnering institutions are involved in it, and it initially takes place between the teachers facilitating it. Frequently, this relies on a long-term professional partnership and is another one in a series of exchanges. However, if one is new to online intercultural exchanges, it is necessary to shop around first. A good lead to follow in this respect is relying on one's own international academic contacts, such as the ones established during *Erasmus* exchanges. Another option is to start an account on the uni-telecollaboration.eu website and look for partners there (see the *Partners* tab). Teachers who are experienced in telecollaboration agree that the best results usually come from meeting in person prior to the exchange. This is an important, but by no means indispensable, factor for a successful exchange.

The first step in the preparatory, teacher-to-teacher phase is agreeing on the theme of the exchange, the relevant tasks, their sequence and chronology, and the necessary technicalities: the form, time and frequency of the intergroup contact, as well as its mode (CMC, ACMC or both). During these arrangements, it is extremely important to make sure that (i) all teachers involved are on the same page in terms of the interpretation of the theme and aim(s) of telecollaboration, (ii) the task instructions are agreed upon and formulated clearly, (iii) the task sequence and chronology accommodate the warm-up phase (the students must be given time and opportunity to process the complexity of the undertaking, they introduce themselves to their partners and get to know them, and the digital literacy of both groups must be accounted for), (iv) the in-class phases for all groups are synchronized and the activities in each classroom, in between the intergroup phases, are uniform in the sense of telecollaboration philosophy and objectives, (v) there is sufficient awareness of and sensitivity to the different communicative styles represented in the exchange by the cultures involved, and the established netiquette caters to cultural differences, and (vi) there is an agreed-upon procedure for conflict resolution.

Once the exchange commences, all teachers need to carefully monitor what is happening in their classrooms and resolve any problems that appear in the course of the telecollaborative activities between the students. As mentioned above, the latter procedure should be subject to prior agreement. At the same time, each teacher needs to take into consideration the local traditions and standards. For example, in some cultures it may be better if the teacher intervenes in the case of a misunderstanding/conflict; in others, especially in the so-called cultures of honor, things may best be left in the hands of the students. In any case, the teachers should encourage students to be explicit about their expectations regarding on-task contacts – their frequency, quality and emergency procedures – and to agree on a code of conduct. However, all measures need to be taken with full

Figure 2. The webpage of the INTENT project



Source: own materials.

awareness of the dynamicity and unpredictability of the exchange. This can be a real challenge but, at the same time, dynamicity and unpredictability is what makes telecollaboration special.

Online intercultural exchange: case study

The online intercultural exchange described here took place in November and December, 2016. The participants were students of the English Studies program from two universities: the Pedagogical University, Krakow, Poland and Pädagogische Hochschule, Freiburg, Germany. The Polish group consisted of 20 people, 19 Kraków students and one Erasmus student from the University of York, UK. The German group incorporated 22 students, all German.

The exchange did not have a specified theme. It revolved around a well-defined task to be carried out in small international teams (two Krakow students + two to three Freiburg students). The task consisted of a collaborative production of a 5-minute clip about an aspect of culture chosen by the group. The students were instructed to choose a problem and examine it comparatively for both contexts (Polish and German).

During the Krakow-Freiburg telecollaboration the following seven stages were distinguished:

Stage 1. Introductions. Each student was asked to prepare a 1-minute video presentation of him/herself as a person and a student. The presentations were made with the use of various tools, mostly *PowerPoint* slideshows captured with *Screencast-O-matic*. They were shared on a *Padlet* wall specifically created for the sake of the exchange.

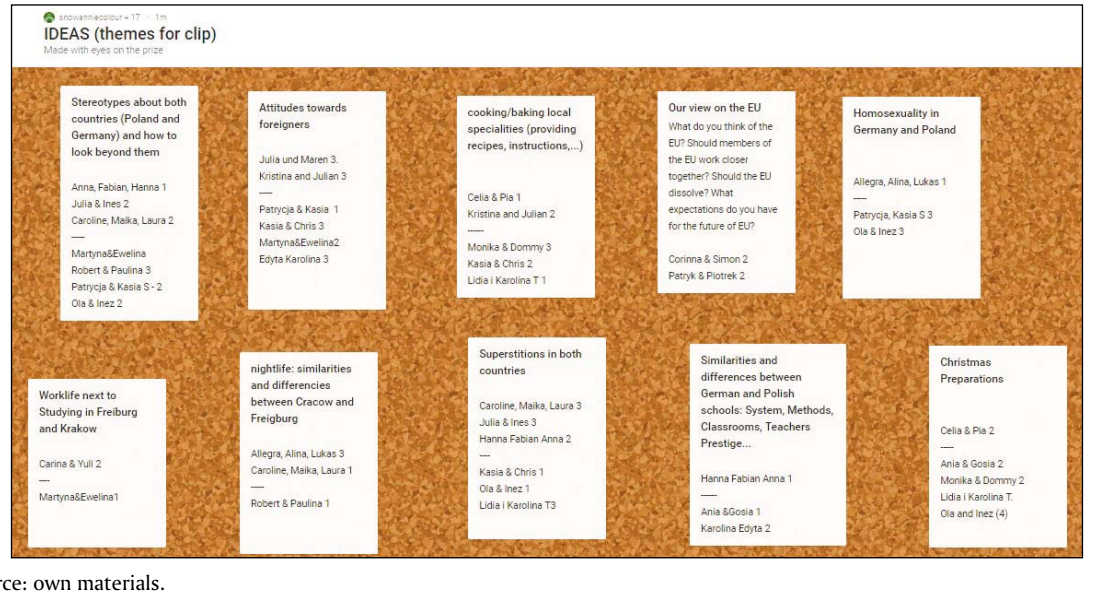
Stage 2. Getting to know each other. The students from both groups watched each other's presentations. The viewing mode established for this activity was as follows: each student from a local group was assigned one person from the partnering group, watched his/her video and introduced this person to the other members of the local group in a f2f meeting. After that, students in small local groups noted the aspects of culture mentioned in the videos that they saw as interesting investigation material for the main task of the exchange (the 5-minute clip, see above).

Stage 3. Selecting task focus. In another f2f class, groups of students proposed themes that they would be willing to work on during the main task stage. The proposals were placed on another *Padlet* wall. There were no limitations on how many themes each local group could propose. Then the students were asked to indicate the three topics they liked the most. Based on this vote of preference, small international groups were selected: German and Polish students who wanted to work on the same topic were put together. In this way 10 small international groups were formed, each consisting of four to five members. The 10 themes selected for investigation in the task stage are presented in Figure 3.

Stage 4. Socializing. Before the small international groups were asked to launch their task-focused work, they were encouraged to establish themselves as a group by agreeing on and trying out different communication channels and getting to know each other better. To facilitate this stage and encourage personal communication, each group was asked to invent a team name.

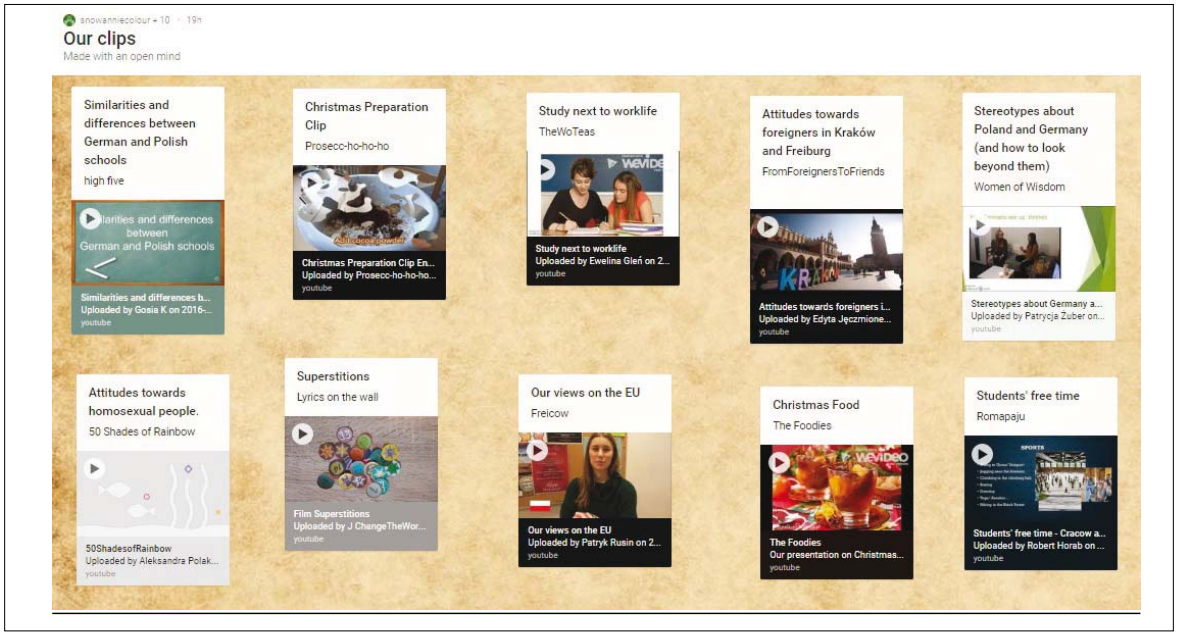
Stage 5. Pro-task planning. During this stage, students in 10 international groups were asked to plan the task phase for their group. In doing so, they were supposed to address different aspects of task execution: timing, role assignment, and procedure. They also prepared mini-studies to be implemented for the purpose of providing data for the presentation and analysis for their clips; these data illustrated the aspect of culture each group had chosen to investigate.

Figure 3. Kraków-Freiburg telecollaboration. Main task themes (*Padlet*)



Source: own materials.

Figure 4. Main task clips shared via *Padlet*



Source: own materials.

Stage 6. Task execution. Stages 5 and 6 were accompanied by weekly f2f in-class meetings, where students were asked to report on the progress of their work. Different exchange-related problems were also discussed and remedied.

Stage 7. Task presentation and evaluation. This stage was implemented in both groups during their last class in December. Both Krakow and Freiburg students watched all 10 clips – shared on yet another *Padlet* wall – and discussed them. Additionally, each group received written feedback from their teacher after class.

Discussion

The online intercultural exchange presented here can be described as highly coherent: each stage was based on the previous phase and capitalized on it. It was also a very challenging undertaking for the students, who were responsible for the planning, management and evaluation of the entire process and its outcomes. It is important to emphasize that fact that all of the groups met the deadline and prepared interesting and valuable video materials. Finally, it offered a lot of opportunities (intro clips, on-task work) to gain insight into another culture.

In view of all this, the Krakow-Freiburg exchange was an instance of establishing a modern CoI with the help of new technologies. First, the tools selected for the telecollaboration (*Padlet*, but also different tools chosen by the students: *Google Drive*, *Facebook groups*) appear to have been well chosen. They facilitated dialogue which, owing to the fact that it revolved around a challenging task, offered many opportunities for learning intercultural, social, and academic skills, such as research, analysis and discussion (including reaching compromise across different boundaries). Second, task execution in most teams resulted in establishing a positive social climate and good group dynamics. Finally, the telecollaboration described was also a pedagogical success in the area of long-distance project work: the students from both universities learned it first-hand, in action, and succeeded in completing their task.

The Krakow-Freiburg exchange also had a few weaknesses, which are discussed below together with potential measures that can be taken to avoid such problems.

First and foremost, the task execution stage (which lasted 3 weeks) turned out to be too short. The research needed to collect data for the presentations was laborious and time-consuming. As a result, the students complained about the haste that, as they saw it, affected the quality of both the process and the products of telecollaboration. This is why the on-task phase will be longer if the telecollaboration scenario presented here is implemented again.

Second, the main problem reported by the students, during in-class and online reports, was communication: its quality and frequency, as well as different expectations thereof. Therefore, it is necessary to emphasize a number of measures to be taken: a longer socializing phase and an encouragement of students to verbalize their expectations concerning communication at the very beginning of the exchange (to discuss expectations with their partners and agree on a code of conduct). Underscoring the importance of students sorting this out on their own is dictated by another observation: teams in which in-group problems were remedied by one of the teachers seemed to have slightly lost their social momentum.

All in all, online intercultural exchanges seem to be a highly recommendable form of academic education. They are challenging, they provide a context for project work in which there is real audience, and they raise cultural awareness and improve intercultural communicative competence by sensitizing the parties involved to the differences in perceptions, working styles and netiquette.

Flipped university class: Introduction

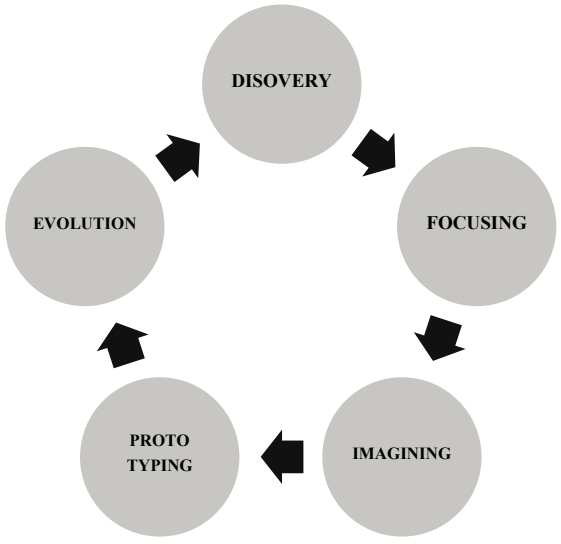
Historically speaking, flipped learning can be traced to Bergmann and Sams (2012) and to the Khan Academy (Thompson, 2013). In both cases, the teachers (Bergmann & Sams, 2012; Khan, DATE) noticed that in-class time could be put to much better use if the lecture/theory/introductory part of the lesson is watched by the students at home, in the form of a video tutorial.

If one opts for the short and concise definition of the flipped class, the core of any flipped class – university classes included – is having the lecture/reading part at home and spending the at-school time doing what previously amounted to homework. Yet, if we do not want to stop at the level of the technique but delve into the philosophy behind it, it is important to keep in mind that flipping one's classes is primarily about combining individualization and collaboration, leaner independence and interdependence, and, most of all, experiential learning.

This is why each flipped class should be planned in such a way so as to maximize the above-mentioned outcomes. The at-home part should allow the students to learn at their own pace and at the time and place of their choice. The materials prepared by the teacher should appeal to a variety of learning styles (convergent/divergent, judging/perceiving, linear/networked) and be multimodal and diverse, to help the student stay focused and understand the concepts presented. At the same time, students should be encouraged to be more autonomous: to familiarize themselves with content other than that recommended by the teacher and to search and evaluate resources in terms of their reliability and utility vis à vis their educational interests and needs. The in-class time should be spent on students learning experientially by applying the knowledge gained at home in practical activities. In doing so, students can be allowed to learn *from* each other and – should they wish so; or should the teacher see it as beneficial – *with* each other, putting their joint expertise into creating products, either practical applications or mental models of what they have learned. The roles of the teacher are as guide a source of feedback, and, most importantly, the author of the tasks that contextualize each individual input as well as collaborative effort.

The philosophy of the flipped classroom, such as the one presented above, goes hand in hand with the design thinking model of education with its five stages: *discovery* (understanding), *focusing* (definition, interpretation), *imagining* (ideation), *prototyping* (experimentation, presenting draft of problem solutions to a potential user), and *evolution* (trying, reflecting and sharing) (Barseghian, 2011; IDEO LCC, 2012).

Figure 5. Design thinking cycle



Source: own materials, informed by Barseghian (2011); IDEO LCC (2012).

In a class organized in accordance with the philosophy of the flipped classroom – relying on a combination of independence, interdependence and experiential learning – the at-home stage is devoted to discovery: acknowledging the challenge/question through familiarizing oneself with the materials prepared/recommended by the teacher, understanding the problem and deciding how it should be approached (based on independent research). If the materials to be studied are accompanied with questions that encourage interpretations, the *focusing* stage may commence at home. Focusing continues in the classroom, if the at-school phase opens with a sharing session in which students discuss their understanding of the issues at hand. Then, with a well-designed in-class task, the students go through the *imagining* phase, leading into the *prototyping* phase, in which they devise their answers to the problem and present them to the teacher (the "user") in a series of cyclical steps (1st draft–teacher feedback–improvement–revised draft–etc.). The final draft worked out by the students is submitted for evaluation, leading to the *evolution stage* in which the teacher offers overall feedback on the product. The students can act on this feedback to improve their work. This cycle is applicable to a number of academic assignments, from essays (written collaboratively in class based on reading done at home), through mental models of problems, to practical applications of knowledge gained (e.g., pedagogical tasks in teaching study programs, business plans in economic studies, designing technologies in engineering, etc.). Examples of assignments are presented in the case-study section below.

Research shows the effectiveness of flipping, both for the students and the teacher. In a study carried out by Rose (2014), 88% of 450 teachers stated that flipping increased their job satisfaction, with 99% intending to continue using the model. In 80% of the classrooms investigated, students' attitudes to learning improved; in 67%, test results went up, especially those of weaker students. The study did not investigate the utility in higher education. Nevertheless, the data are encouraging. Combined with the results of studies pointing to the utility and effectiveness of design thinking in higher education (Matthews & Wrigley, 2011; Koria et al., 2011; Laakso & Clavert, 2014), research suggests that flipping is a pedagogical option worth considering in higher education.

Flipped university: Case study

A course taught by the author of this article at the Pedagogical University in Krakow called *Individual differences in language learning, on- and offline* is an example of a flipped class in higher education.

This course is hosted on the university's Moodle platform and consists of seven modules, all organized in a similar way. The class is provided with a list of learning outcomes (1). The materials for the at-home study are then made available. The materials are divided between four groups into which all students are assigned at the onset of the course (2). The students are asked to familiarize themselves with the materials before they attend class.

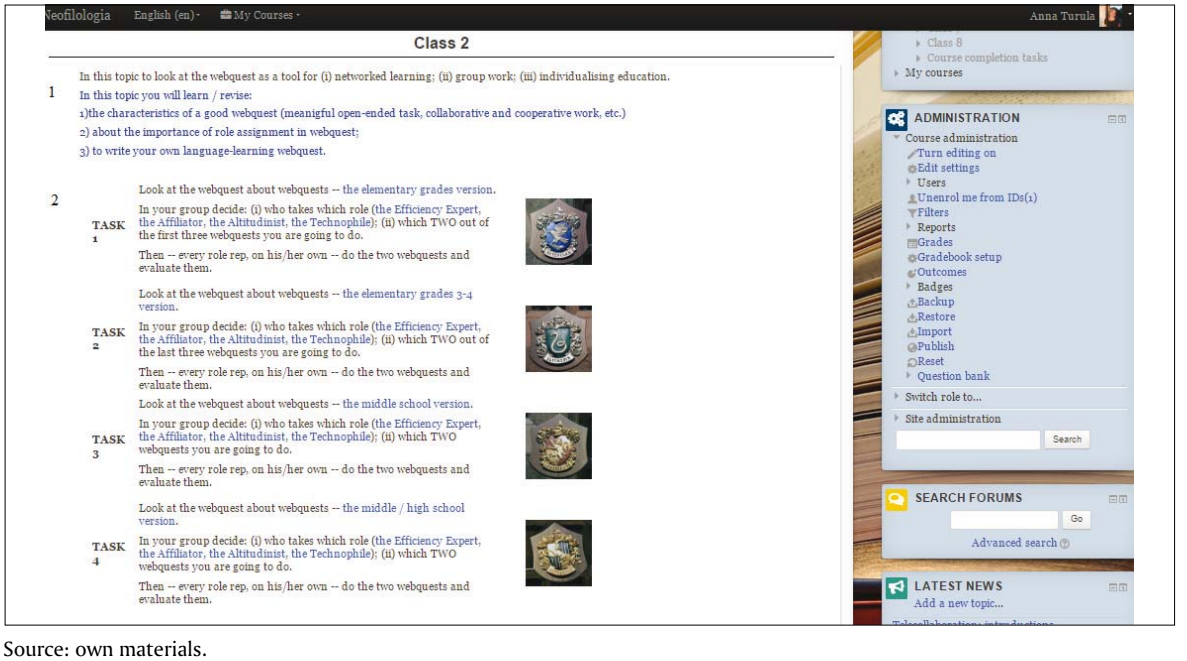
As a result of materials being divided between groups, each student is equipped with only a quarter of the knowledge needed.[2] This is why the in-class phase begins with sharing information studied at home, following Aronson's jigsaw class model.[3] This phase is facilitated through a (series of) question(s) meant to channel student interpretations of the content (3); the sharing goes on in a space external to the Moodle course – *Padlet*, *Dotstorming*, *Google Drive*, etc. (4).

When this phase is completed, the knowledge gained at home is put together in groups and processed using the jigsaw mode and is then translated into a product. As this course is part of the EFL teacher-training program, the in-class tasks are related to language education. In the case presented above, it consisted of students' writing their own WebQuest (Figure 8).

The product can also be a mental model of connections between good and bad ways of learning, language-learning strategies and digital tools that are likely to promote the use of said strategies (Figure 9; example from another class).

As in-class activities follow the design-thinking model, the students – working collaboratively in each of the seven modules – are allowed to present their product to the teacher at different stages of its de-

Figure 6. Sample course module: materials for home study

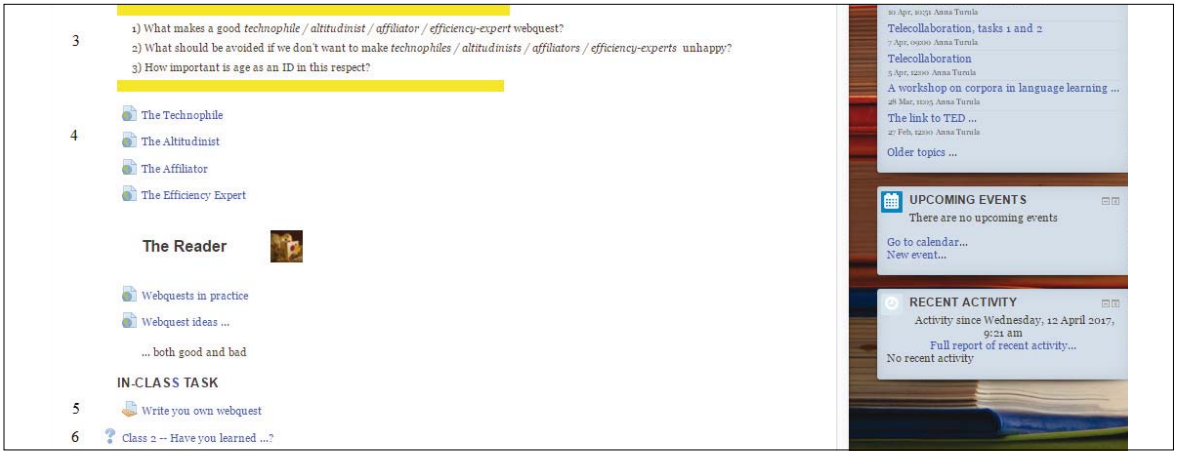


Source: own materials.

[2] In the case of Class 2 (above), each of the four groups had to complete a different WebQuest about WebQuests – an activity familiarizing the participants with the idea of WebQuest and principles of writing a good one on their own (cf. www.WebQuest.org).

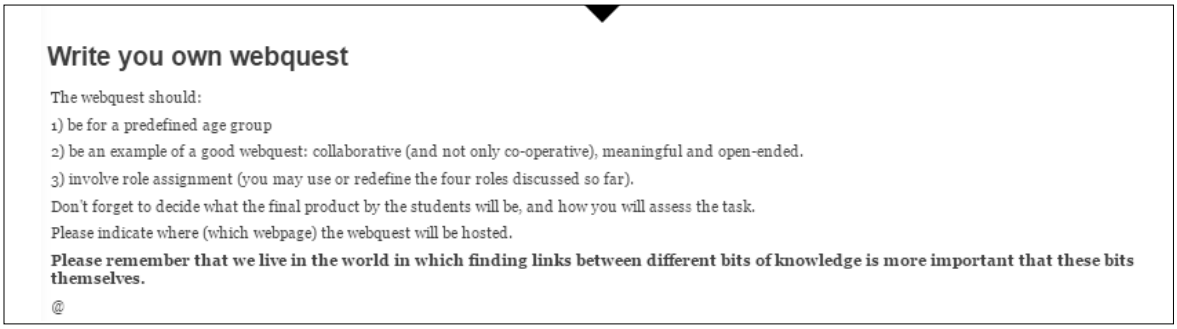
[3] https://www.jigsaw.org/; in Class 2 this meant that comparing ideas drawn from four different WebQuests.

Figure 7. Sample course module: materials for in-class activities



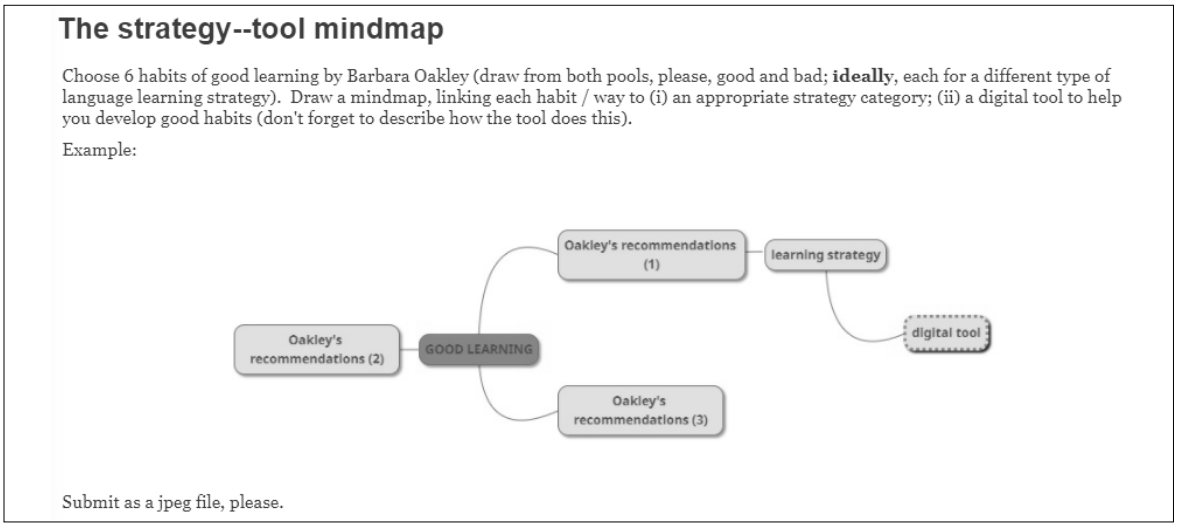
Source: own materials.

Figure 8. The WebQuest task



Source: own materials.

Figure 9. The mind-mapping task



Source: own materials.

velopment. Since all outcomes are aimed at potential learners of English as a foreign language (the students' most likely future professional environment), the teacher acts as both the real user (him/herself) and a kind of proxy (representing hypothetical language learners). As a result, feedback is offered by the teacher from these two different perspectives (*I like it./Your students will possibly like it*.). The evaluation is offered continuously throughout task execution, and the students can make product amendments as they

see fit. At the end of the in-class time, the outcomes are submitted for the teacher's overall evaluation, which is offered via the Moodle course activity *assignment*. Based on this evaluation, the students can reflect upon the quality of their work and think of potential improvements. The cycle is closed in the next class, when students are asked to self-evaluate, confirming whether or not they have acquired the knowledge and skills promised in the introduction to the module in terms of learning outcomes. The self-evaluation is carried out through a Moodle poll (6).

Discussion

The module presented – similarly to the other 6 modules of the course discussed – can be inscribed into the design thinking cycle presented in Figure 10.

In such a case, the course follows the philosophy of flipped classrooms in a number of ways. The jigsaw class and task-based modes promote collaborative learning. As a result – and this is said based on a three-year experience teaching the course – each of the seven classes is a beehive of activity, fuelled by both the peer-to-peer sharing of ideas and the teacher's continuous feedback. The at-home phase caters to individual differences in terms of the anytime/anywhere studying mode and offers a variety of materials (text, video, WebQuest). The fact that the form of the class is attractive to students has been confirmed over 3 years of implementation by their in-class involvement, as well as by the favorable opinions expressed in informal exchanges with the teacher.

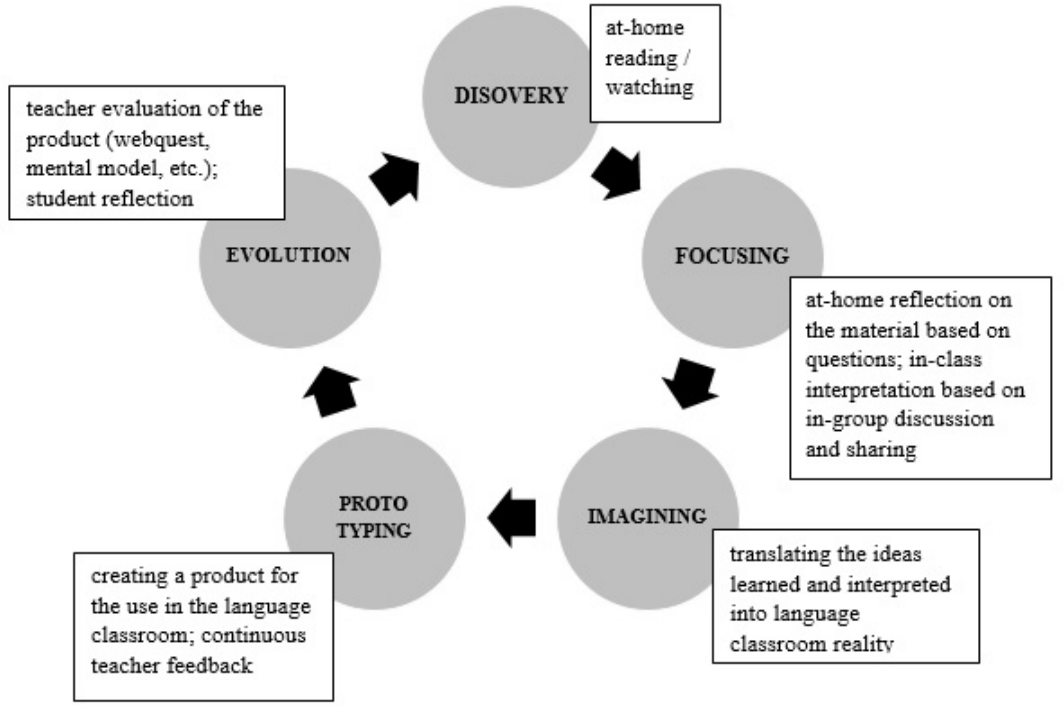
The observations of and reflection on the implementation of the course are the basis for the following guidelines for flipping classes in higher education:

(1) The at-home component can be entirely based on ready-made materials, both textual and multimedial. Such was the organization of the course described. However, for a personal touch, the teacher may opt for self-made content. The knowledge of tools[4] such as *Screencast-O-matic* or *Present.me* (for video tutorials), *Piktochart* (for infographics), *TimelineJS* (for timelines) or *Strip Generator* (for comics) would then be useful.

(2) The jigsaw mode, useful in promoting collaborative learning and group integration, is also potentially problematic for class preparation: knowing that each meeting begins with a sharing phase, some students may choose to come unprepared. If this becomes a problem, the teacher may want to think about solutions, such as students' reports on the at-home reading/watching component.

(3) Teacher working time is comparable to how much one would invest in non-flipped education. What may be important to know is that this investment is the greatest when choosing materials and evaluating students' work. Special effort needs

Figure 10. Design thinking at flipped university



Source: own materials.

[4] This is only a selection.

to be made for the materials to be closely related to the in-class task; in other words, the activity planned for the meeting should not be possible to finish without the at-home reading/watching component. In turn, feedback on what the students produce in class should be constructive so as to trigger reflection necessary for evolution. Comparatively less is done in class: the teacher only facilitates prototyping; otherwise, their role is marginal. Yet, given that what happens in class is of utmost importance (the experience, the collaboration), it seems legitimate to state that the core of the flip is the in-class task itself. Therefore, the teacher's effort should primarily be directed at devising a good task around which all other actions should revolve.

Overall, flipping should be seen as educational philosophy, rather than a mere technique. New technologies enhance pedagogy by accommodating, individually for each student, the *understanding*, *focusing* (partly) and *evolution* phases of design thinking. They also play a part in the *imagining* and *prototyping* phases, which are carried out in class, while the students translate knowledge into skills in a continuous dialogue with their peers and their teacher. As a result, a community of inquiry is created, which merges the individual and the collaborative.

Conclusions

The three pedagogical solutions presented in this article constitute three ways in which new technologies can be used in university education to create communities of inquiry. All three cases involve students shifting between *collaborative* and *individual* modes, learning with and from each other, as well as reflecting on the process. In blended tutoring, the two modes change as the alternative forms of tutoring (traditional and online) interweave; in the flipped class–with the altering learning environment–oscillating between the at-home reflective stage and in-class collaboration. In telecollaboration, the *together* mode is so rich and complex that it offers numerous and varied opportunities for *individual* interpretation, re-evaluation and mindshift.

All this, as–hopefully–proven by the three case studies, results from a symbiotic relationship between academic education and technology, a relationship which is flexible and non-reductionist, and which can successfully use—but does not have to be confined to—the university e-learning platform.

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ICT goes university. Three ideas and their implementations

The article looks at three pedagogical solutions – blended tutoring, online intercultural exchanges and the flipped classroom – which capitalize on the symbiosis between pedagogy and new technologies. Each of the three proposals stems from a belief that university education should be dialogic and result in meaning construction rather than content transmission.

There is a common scheme in which all three solutions are presented here. First, each proposal is accommodated with a certain theoretical outline. Then the pedagogical routines employed during its implementation are discussed. Each presentation cycle is closed with a description and analysis of a case study: the interaction between a tutor and a tutee in the case of blended tutoring; the course of a 2014 German-Polish telecollaboration for Online Intercultural Exchanges; and finally, the different aspects of a merger between the flipped university and the Design Thinking model.

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