Project “Activating Students in Online Classes”
2020-1-PL01-KA226-HE-096358

Intellectual Output 4.

Best practices in using the flipped classroom methodology

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UNIVERSITY OF SILESIA IN KATOWICE

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Project "Activating Students in Online Classes"

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Contents

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PREFACE

The IO4 contains some of the best practices on applying the flopped methodology in higher education. These practices are provoked by different reasons, one important of which was how to make the teaching material more attractive to students in order that they can participate more actively in the learning process.

Increasing the students' interests and activities became an urgent task during the Kovid -19 pandemic situation. This is because the massive replacement of classroom teaching with online distance teaching led to new challenges to both teachers and students. This was an unpredictable interruption of previous teaching and learning practices, for which many teachers were unprepared.

The role of the teaches had to be changed from being in full control of classroom teaching to being an assistant or support to the cooperating teacher. Therefore, the role of the student teacher moved from co-teacher to *teaching assistant or less*. In addition, teachers realised that basic needs of their classroom students had to be met before online learning could begin. The key challenge became how to create interactive and digital activities that meaningfully engage students.

These radical changes were at the bottom of the project "Activating students in online classes". The main goal of the project was to investigate the opportunities of the flipped methodology as a perspective means to make students more active in online classes. The essence of this methodology is that students should be motivated to get acquainted with the content independently (outside of classes) and practice how much they have mastered it in class. This is the opposite to the more common practice of introducing new content in class, followed by assigning homework and projects students are supposed to do independently at home. For that the best practices in IO3 provide many examples and suggestions.

Nevertheless, there are some common features for introducing flipped approach in students' teaching and learning. Essential among these are the reasons to decide to apply the flipped approach. Do the teachers aim to develop students independent or critical thinking; do they want to increase their interest to the given course; or do they plan to develop spirit of cooperation among students, etc. After that teachers should decide How much units and what exactly units they need to prepared for: pre-class, in class, and post-class activities. What kind

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of support materials or assignments for the pre-class activities (video lectures, presentation, short texts, questions, etc.), and what type of activities during the class (Q&A session, discussions, etc.).

Important for teachers is to be aware about new methods when using the flipped classroom such as: recording presentation with voice recorded or mini-lectures in video format (how much presentations); dividing students into small groups for online discussion; e-tests for starting and ending classes, and others. These methods can be supported by new inline tools like Prezi software, Screenr, Coggle.it, Mindmup, Kahoot, and many others. All these changes require other way to evaluate students' knowledge. Instead of traditional exam, teachers may apply combination of in-class and out-of-class online assignments; questionnaires; short extracurricular writing tasks, etc.

Finally, as the best practices show, teachers may compare the outcomes of the flipped classroom method with traditional way of lecturing in class. Do this method allow for more time in class to deepen the student understanding; more personal interaction with different students; improved communication with students, or not? What is the students' opinion of this way to learn, is it more beneficial for them, and precisely for whom – for more or less advanced students, students with some difficulties, etc.

The ensemble of collected best practices may provide useful answers to all these questions. These practices are summarised from some publications, as well as from the experience of teachers of three universities, developing this project.

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1. EFFECTS OF COVID-19 ON HIGHER EDUCATION

The International Associations of Universities carried out a survey among 424 HEIs in 109 countries about the impact of Covid-19 on higher education. The results show that almost all institutions have been impacted by COVID 19, while 59% of them replied that all campus activities have stopped, and the institution is completely closed. Two thirds of respondents reported that classroom teaching has been replaced by distance teaching and learning, and this shift did not come without challenges. Among these challenges were the access to technical infrastructure, competences and pedagogies for distance learning. At the same time the forced move to distance teaching and learning offered some opportunities to propose more flexible learning possibilities, explore blended or hybrid learning and to mix synchronous learning with asynchronous learning. Besides these issues, COVID 19 has had a negative impact on international student mobility at 89% of the surveyed HEIs. This changing environment, however, opened a way for the increasing virtual mobility in 60% of these HEIs. (Marinoni, van't Land, & Jensen, 2020, p. 11).

Other studies also confirm that student teaching was severely interrupted and altered due to the COVID-19 pandemic. For example, Piccolo, Tipton, & Livers (2020, p. 298) summarised the changes for student teachers in the next table 1.

These changes suggest that student teachers became more flexible as their roles changed within this new online format. Most student teachers went from being in full control of classroom teaching to being an assistant or support to the cooperating teacher. Therefore, the role of the student teacher changed from co-teacher to *teaching assistant or less*. In addition, student teachers realized that basic needs of their elementary classroom students had to be met before online learning could begin (Piccolo, Tipton, & Livers, 2020, p. 299). As Dursun (2019) states adapting to an online teaching experience is a new landscape that schools and universities are still learning how to navigate effectively.

According to Crittenden et al. (2019, p. 5) digitalization is like a fast-moving tsunami, and it is imperative that college students gain exposure to potentially disruptive, cutting-edge technologies. These technologies should help the student learning process, which is highly cognitive. The learner cannot simply be a passive recipient, as people learn best when actively involved in the process (Dale, 1954). Therefore, HEIs should be prepared to not only provide knowledge but also help students learn how to accept responsibility for their learning, to develop self-control in their use of technology Crittenden et al. (2019, p. 7). These authors also suggest that faculty members can apply flipped classrooms to more

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digital, interactive exposure through in-class polling platforms, digital simulation (i.e., serious games), and virtual reality (Ibid, p. 8). The key challenge, however, remains to create interactive, digitalized platforms, and digital activities that meaningfully engage students.

Table 1. Before and After Pandemic-based Outcomes for Student Teachers

Before COVID-19 Outbreak	**During COVID-19 Outbreak**
Passing of two required state-mandated certification tests	Waiver of two required state-mandated certification tests due to the COVID-19 pandemic.
All student teachers reported to their schools in-person.	Student teachers abruptly had to choose to either continue student teaching online or to complete their student teaching immediately.
Communication with cooperating teachers and university supervisors occurred face-to-face, by email, phone, and text messaging.	Face-to-face communication was replaced by video conferencing through Zoom.
Lesson planning and delivery occurred in small group, face-to-face meetings	Lesson planning and delivery occurred via email, video conferencing and learning management system platforms
Mode of instruction occurred in small groups or whole class through in-person instruction.	Mode of instruction occurred in small groups or whole classes through video conferencing on Zoom or Google Hangouts.
Instruction included the use of hands-on manipulatives and paper-based texts.	Instruction included a blended learning environment, such as online versions of manipulatives and ebooks (Oliver & Stallings, 2014).
Classroom management occurred face-to-face in a physical classroom.	Classroom management occurred online via a virtual classroom.

2. FLIPPED CLASSROOM METHOD

The Flipped Classroom is a blended learning model in which traditional ideas about classroom activities and homework are reversed, or "flipped." In most cases the Flipped classroom method means process of learning in which students get acquainted with the content independently (outside of classes) and practice how much they have mastered it in class. This is the opposite to the more common practice of introducing new content in class, followed by assigning homework and projects students are supposed to do independently at home. Shortly, this is an approach in which learners get knowledge at home (lectures in form of the text, video, ppp, and so) and work on problem solving during the classes with teachers.

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In a Flipped classroom, students might do at home the following: watch an online lecture; review online course material; read physical or digital texts; participate in an online discussion; perform research.

In difference to that they might practice at class other activities such as: skill practice (guided or unguided by the teacher); in-person, face-to-face discussion with peers; debate; presentations; station learning; lab experiments; peer assessment and review[1].

True flipped learning is about opening up class time and transforming it into students' personalised learning experiences. In other words, in the flipped classroom model, students practice under the guidance of the teacher, while accessing content on their own.

3. GUIDANCE TO IMPLEMENT A FLIPPED CLASSROOM

3.1. Sahin and Shelley (2020, 13-14) state that there are a few *best practices* that are related to asynchronous learning. Based on one of the author's experiences with an upper division engineering course, they provide an example of such best practice:

• Each lesson should have an introduction, whether video or document, that summarizes the material dealt with in that lesson, how it relates to prior and future material, and the importance of that material;

• Videoing an entire lecture is not the best way to get material to students, especially since the video will be rather long. An alternative approach is to break up a lecture into a series of learning objects, or learning chunks, where the video is ten minutes or less;

• The use of learning objects requires an assessment of the learning object as well as student acquisition of specified learning objectives or outcomes. The evaluation of the learning objects should demonstrate how it supports and enhances student learning;

• Students should be told to take notes while watching the videos, since the process of listening and writing notes enhances comprehension;

[1] https://www.teachthought.com/learning/the-definition-of-the-flipped-classroom/

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• The ability to provide video, web links and other external material along with a textbook can help in the learning process for the student, but the instructor should provide a "roadmap" as to a suggestion on how to best use the material;

• If links are provided to websites for additional materials, make sure that over a period of time that the links are still viable;

• Provide a method of interaction, such as chat rooms, for students to interact with both their peers and the instructor;

• In an engineering course, typically concepts are introduced by virtue of an example or two. The learning objects should deal with simple examples to introduce the concepts;

• In most lessons, especially in the STEM area, there is a lot of material for the student to digest. Instructors can create a "Quick Guide" that summarizes, in less than a page, the material.

3.2. Jeff Dunn (2014) has wrote a short piece on "The 6-step guide to flipping your classroom", which presented 6 easy steps for implementing flipped classroom[2].

1. *Plan* - figure out which lesson in particular you want to flip. Outline the key learning outcomes and a lesson plan.

2. *Record* - instead of teaching this lesson in-person, make a video. A screencast works. Make sure it contains all the key elements you'd mention in the classroom.

3. *Share* - send the video to your students. Make it engaging and clear. Explain that the video's content will be fully discussed in class.

4. *Change* - now that your students have viewed your lesson, they're prepared to actually go more in-depth than ever before.

5. *Group* - an effective way to discuss the topic is to separate into groups where students are given a task to perform. Write a poem, a play, make a video, etc.

[2] https://www.maastrichtuniversity.nl/education/online-education-um/teaching-staff/what-flipping-classroom-and-how-do-i-do-it

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6. *Regroup*: Get the class back together to share the individual group's work with everyone. Ask questions, dive deeper than ever before.

3.3. Elizabeth Trach (2020) suggests the following steps to flip the classroom[3]:

1. *Determine your technology* - choosing the technology that can best help you film, edit, and share your videos is a crucial first step. You'll also need to choose a hosting service and determine how your students will access all of your content.
2. *Create your videos and content* - when it's time to film, keep it short and sweet. Don't be afraid to be entertaining! You can also seek out videos and other interactive content from quality open educational resource (OER) providers such as CK-12 and MERLOT.
3. *Transparent with Students* **-** before you launch, clearly explain what flipped learning is and why you are doing it. Be prepared to address concerns and to revisit the "how" and the "why" often.
4. *Make your students accountable* **-** Don't forget that your flipped learning model depends on student participation. Be sure to devise a system that tracks and holds students accountable for watching your videos. One way to do this is by using short formative quizzes at the beginning of a lesson. These will help you determine which students did their homework, which didn't, and who needs help.
5. *Keep It Up* - find a schedule and system that works for you so that filming, lesson planning and assessment all become routine.

Besides these steps, she suggests also what tools could be used for flipped classroom such as: Khan Academy, Nearpod, Playposit, BrainPOP and others, as well potential classroom activities. Important among these activities for the success of the flipped method are: brief assessment to make sure that everyone is ready for this class; Q&A session and breaking students into groups to help each other fill in the gaps; fishbowl practice (having volunteers come to the front to solve a problem, engage in discussion or perform a task while everyone watches); role play (assigning roles and have students face off in debate or discussion); stay active.

[3] https://www.schoology.com/blog/flipped-classroom

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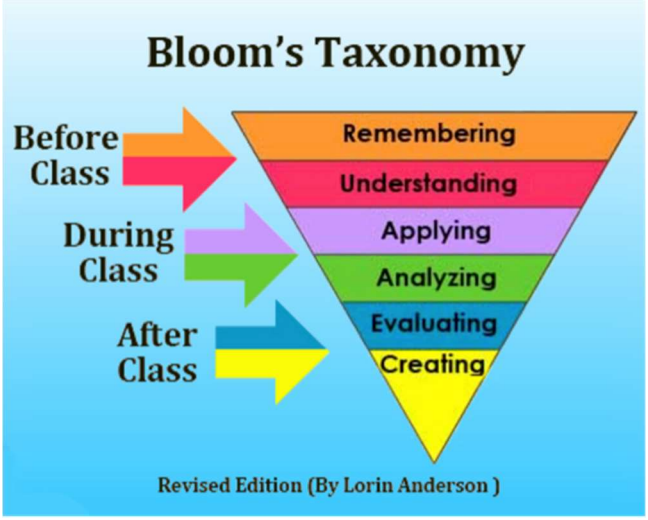
Figure 1. The flipped classroom corresponds to the reverse Bloom's taxonomy (Anderson, L. et al., 2013)[4]



3.4. Based on her proper experience Julee Waldrop (2016) makes the following recommendations for applying the flipped method:

1. Making available online (in an LMS system) rules for students on the use of e-materials. ("Pretend to be a student and try to download them to see how long this process takes.")
2. Keeping in mind that students have different learning preferences, so it is necessary to anticipate and use a variety of activities throughout the learning process in order to engage everyone in the best possible way.
3. Planning activities during the class and the availability of specific instructions and deadlines will increase the active time in the class.
4. Achieving a balance between the activity of the teacher and the involvement of students so that students have a sense of partnership.
5. Developing methods such as quizzes, questionnaires, tests or short writing assignments to hold students accountable.

[4] Anderson, L. W. et al. (2013) A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives. Abridged Edition. Boston, MA (Pearson New International Edition)

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Most of the teachers and researchers on flipped classroom method share the opinion that its application requires a lot of time to create new course content, and to planning and providing active learning activities.

4. SOME BEST PRACTICES IN USING THE FLIPPED TEACHING

4.1. Reasons for using the flipped approach at the university level

As Saitta, Morrison, Waldrop and Bowdon (2016, 1) state the "flipped" teaching has been applied mainly in secondary schools, but in recent years it became popular in higher education as well. More than. its significance seems to increase during the Covid-19 pandemic periods. In general, the method assumes assigning students to work on different online and paper materials before the traditional lecture, which frees up class time for discussion, problem-solving assignments, questions and answers, and other engaging experiences. This way the approach minimizes the amount of time that students spend passively listening to lectures and maximizes the amount of class time that they spend actively learning material.

The researchers suggest that the "flipping" approach could be applied apply to many scientific fields. According to Talbert (2016, 31) the method was successfully used in areas such as economics, biology, computer science, engineering, physics, statistics, and mathematics. The learning objectives of the "flipping approach" are in line with Bloom's Taxonomy of Educational Objectives (Bloom, 1956) as it involves moving the most basic elements of learning outside of class, making use of class time to support students as they move into the higher levels of learning (Waldrop and Bowdon, 2016, 2). The inverted classroom also fits well into the theoretical framework of *self-regulated learning* (Pintrich, 2004). Talbert (2016, 42) consider that the students themselves have a greater need than ever to acquire self-regulated learning skills, since the problems that they will be asked to solve in their professions defy simple categorization.

This approach differs from other methods by applying an active learning in the classroom (Kolb, 1984). It means students have an opportunity to transfer their knowledge into action in the classroom. Therefore, it places more responsibility for learning on students themselves. This

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way it increases the students' engagement to learn by requiring to work before taking part in the class.

Moving traditional classroom events outside the class and bringing outside events in the class has been termed "inverted classroom" by Lage, Platt, and Treglia (2000), where the teacher mostly answers students' questions, presents mini lectures, guides problem-solving work, and leads class discussions. The Bowen's (2012) book *Teaching Naked* features also the flipped method as a primary topic.

Usually the effects of the "flipped classroom" are investigated by two methods: (1) quantitative data about student performance on assessments, and (2) anecdotal descriptions of student engagement and motivation (Berrett, 2012). There are also cases when students report some difficulties adapting to the method, and that the method requires more work or it has no impact on their grades (Findlay-Thompson & Mombourquette, 2014). Additionally, some critics of the method cite other obstacles such as students' lack of universal access to technology (Nielsen, 2012).

The role of technology became more important in the conditions of forced distance learning during the Covid-19 pandemics for both teachers and students. Teachers have to learn how to prepare video-lectures and other materials before students come to class, how to apply other software and platforms, while students need to take more responsibility of self-learning.

4.2. Impact of distance e-learning in school education

Hristova, et al., (2020) assessed the impact of distance learning in an electronic environment on the effectiveness of school education. Their survey was carried out in July 2020 and covered 135 schools across the country. It was attended by 4448 students from 5th to 12th grade, 5,403 parents, 1,885 teachers, and 135 principals. It does not include students in primary school (I-IV grade).

Their research methodology integrated the so-called Schulman's Learning Table (Schulman, 2002). According to Schulman's theory, engagement is a fundamental goal of education. The logical chain on which his model is built is as follows: learning begins with the involvement of students, which in turn leads to the accumulation of knowledge and understanding. When the

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student understands, he is able to think and act. Critical thinking leads to the ability to judge, which in turn contributes to the development of commitment and identity.

Based on the results they concluded that teacher motivation and competences, structured teaching, the application of systems to adapt and support learning, and the provision of feedback play a key role in the effectiveness of distance learning. The role of students' self-learning and time management skills is also considered.

4.3. Using the flipped approach in fundamentals of chemistry

Cherie Yestrebsky (2016) shares her experience in using the flipped approach to teach fundamentals of chemistry II to first- and second-year students. The course enrollment is very high about 450 students enrolled in a single class. The class is taught in a large stadium seating auditorium using a computer and overhead projection onto at least one very large screen.

She decided to apply the flipped approach because the most common student comment about the course was that there weren't enough examples given in class.

She requested that her department chair assign her two large second-semester general chemistry classes in order to make a comparison between traditional and flipped modality.

Class 1 was taught in the traditional lecture format by using PowerPoint presentations and a wireless remote microphone in the lecture, while Class 2 was the flipped class, in which students listened to lectures online and spent class time over examples that she presented or working out problems in small groups. Class time for Class 2 was used for problem solving and additional discussion on topics that students found particularly difficult. The problems were similar to the suggested homework.

She noticed was that the students do follow the process and stay focused on the problem to be solved. There were enough successful students to adequately help those who struggle, while there were also students who were not comfortable with the class work on problem solving.

The comparison of two classes showed that there were little differences on exams during the semester and on the final exam. However, the weekly quiz grades did improve significantly for the flipped class. A disappointing result was that the flipped method did not appear to help the lowest performing students. Based on that she concluded that under the conditions

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explored in this experiment, more highly motivated students earned higher scores on quizzes and exams using the flipped mode of instruction. There seems to be no effect on students earning lower grades.

At the end she gives some recommendation how to be prepared for the flipped classroom. Essential is to break a traditional l50-minutes lecture into four lectures of 12 to 15 minutes. Particularly important is to use the correct words and to clearly communicate the material. Besides, the recording process is more difficult, but it is also a useful exercise in self-awareness of her communication style. She kept problem solving in class focused on problems from the most recent material, which encouraged students to keep up with the lectures.

In general, this method of teaching helps those students who are highly motivated but still struggling with the material to achieve a higher grade. She states that she will definitely use this method of teaching in the future.

4.4. Using the flipped approach in mathematics

In the field of mathematics Robert Talbert (2016, 30) was concerned that students had developed a dependency upon him and his lecturing as a necessary condition for effective problem-solving. Its department considered that this dependence of students on the instructor was antithetical to a liberal education and harmful to students in the long term. Based on that, he decided to create an inverted or "flipped" design for calculus to address all of these challenges.

In redesigning his course, each individual content unit was broken down into three phases: pre-class, in class, and post-class. During a *pre-class phase*, students engaged in self-directed learning activities; in an *in-class phase* focused on using scheduled class meetings to engage in rigorous problem-solving tasks; and a *post-class phase* gave students the opportunity to work on follow up activities to deepen their mastery of the material (Talbert, 2016, 31). To support the pre-class phase of the course, they created a playlist of videos to replace in-class lectures, which consists of 91 videos covering the first four chapter of the basic book. In the pre-class phase the students work on a series of assignments called Guided Practice. Each Guided Practice includes: an *overview*; *learning objectives*; a *reading and viewing assignment* consisting

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of selections from the text and the YouTube playlist; a set of *exercises*; and instructions on *how to turn in work*.

These Guided Practice were considered to help students to become fluent with the background needed to "launch" the in-class activities. Students submitted their responses to the exercises, including any questions they had. These responses were due no later than one hour prior to class time. In the hour before class, he scanned student responses to look for patterns of misconceptions, which allowed him to see if there were any widespread misconceptions, which could be quickly addressed by in class mini-lectures. Approximately 5 to 10 minutes of the beginning in class meeting was devoted to a question-and-answer session on the Guided Practice. After the question-and-answer session, students were given a three-question multiple-choice Entrance Quiz, covering the Basic Objectives. The post-class phase consisted of various kinds of follow-up work to students in order to deepen their understanding of the material.

He believed that the inverted classroom helps the students' ability to exert control over the stream of information being presented. Besides that, the inverted classroom gives more time in class meeting for students to explore concepts that are presented through close interaction with the instructor; it provides experience with self-regulated learning behaviors and the instructor is able to interact with every student during every class meeting.

The most important lesson for him was that communication with students is the key to success in inverted class room. Instructors must give timely and instructive feedback in all phases of the course. In terms of access to materials, nearly all the materials in the calculus course were available for free online.

4.5. Training nurses' trough the flipped classroom method.

- **Under what conditions is the flipped classroom method applied**

One of the main goals in the education and training of nurses is for them to be able to provide safe and high-quality medical care to individual patients. The ultimate learning goal of the Gender Health for NP course is to achieve the ability to apply clinical knowledge in practice in

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dealing with real problems of patients. The training was conducted in a safe environment, i.e. before working with real patients, using the flipped classroom method.

The Gender Health for NP course is at the master's level and is mandatory at the College of Nursing at the University of Central Florida (UCF)[5], and its content is part of the national certification exam (acquisition of a practice license).

Prior to the application of the flipped classroom method, the Gender Health for NP course was taught in a hybrid (web-mediated) form with approximately 50 percent of the teaching time in a face-to-face format. The online content contained lectures, web-based materials and asynchronous discussions. Face-to-face time included a traditional component for lecturing, answering students' questions, and conducting tests.

The flipped room method is applied in compliance with the course objectives established for the program, as well as the hybrid format during the semester. Most of the course content is presented in the inverted room, with three exceptions. The first day of training is used to review the requirements and expectations of the course, providing instruction and the final exam. In two other cases, guest speakers with face-to-face class lectures were invited.

- **Methods used**

For each module of the Gender Health for NP course program, the teacher recorded via QuickTime Player[6] a 15- or 30-minute presentation (MS Power Point) in video format (a total of 26 recordings). Initially, these videos were uploaded to the university's iTunes account, but due to problems with accessing and using the videos, the teacher uploads them to Vimeo (www.vimeo.com), where they are password protected and students can use them without any problems. Recorded lectures are provided to students the week before class, and during the first day of school, students are told that they must review these lectures before coming to class.

[5] The College of Nursing at the University of Central Florida (UCF) is the second largest public university in the nation and the largest in Florida (www. ucf.edu).
[6] QuickTime Player - www.quicktime.com; a basic version of this tool is provided for free to Mac users.

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During the present classes, the presentations were analysed insofar as they contained real clinical cases and other practice-based clinical activities to solve problems such as research or incentives to participate in discussions.

- **Evaluation of students' knowledge**

When applying the inverted room method, two forms of evaluation were used: study and focus group. During the last week of classes (before the final exams), students had to fill out an anonymous online questionnaire containing 33 questions. A quantitative assessment has been made through it. To complete it, it was necessary for the students to be acquainted with the content of the presentations (video recordings), and there were also questions related to the material and the activities performed during the inverted room.

A focus group was applied to understand the quantitative data collected in the study - perceptions and preferences of students, their feelings and meanings. It was conducted by another member of the faculty and not by the lecturer himself.

- **Recommendations for applying the inverted room method**

The author offers a list of recommendations for lecturers who would apply this method:

- Make available online (in an LMS system) rules for students on the use of e-materials. ("Pretend to be a student and try to download them to see how long this process takes.")
- Keep in mind that students have different learning preferences, so it is necessary to anticipate and use a variety of activities throughout the learning process in order to engage everyone in the best possible way.
- Planning activities during the class and the availability of specific instructions and deadlines will increase the active time in the class.
- To achieve a balance between the activity of the teacher and the involvement of students so that students have a sense of partnership.
- Develop methods such as quizzes, questionnaires, tests or short writing assignments to hold students accountable.

- **Opinion of the teacher**

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According to Julee Waldrop (2016), the method may be useful for student learning, but it is not yet certain that it improves student learning. Assumes that other courses, such as clinical practice, pharmacology, or pathophysiology, are more appropriate for the flipped room method. She is of the opinion that future research is needed on the educational effectiveness of the inverted room method.

The article confirms that the efficient application of the method depends strongly on the type of discipline and the speciality.

4.6. Good practice in history teaching using the flipped classroom method

- **Under what conditions is the flipped classroom method applied**

The flipped room method was used during the spring semester of 2013 to teach two sections of the U.S. course. history since the end of Reconstruction [U.S. II (U.S. History, 1877 – Present)]. The students and the teacher met three times each week for 50 minutes for 16 weeks. The number of students is a total of 110.

The aim of the teacher was to evaluate the effectiveness of the flipped room method in helping students to fulfil the learning objectives of the course. The assessment is based on an analysis of students' perceptions (registered at the end of the semester) and comparing them with the results of students' training in the same course in the previous 2012. The objectives of the analysis are to assess the impact of the flipped room on students' understanding of history, to describe the advantages and disadvantages that using this method may have for lecturers in history courses.

The decision to apply the flipped room method is related to two key motives:

- The first motive is related to the curriculum - to restructure the history courses according to the model Writing Across the Curriculum (WAC), i.e. "writing for learning" to encourage students to write and thus encourage them to learn concepts in the subject area, to achieve critical thinking skills; the writing process allows students to better conceptualize historical content and thus better internalize information. In this case, the flipped room is a method used to achieve engagement, critical thinking and effective

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communication which help students to use their writing, thinking and communication skills in a variety of contexts, both inside and outside the classroom.

- The second is philosophically oriented. It is related to what has long been stated by history lecturers - they have long struggled with student passivity in understanding the past. Most students simply receive information and try to remember it, especially about facts about the past. According to the author of the article, however, students must learn the methodologies of historical research and interpretation so that they can assess current, specific and new perspectives on the past and present, both during training and outside the classroom, before and after receiving a university degree.

- **Methods used**

The application of the flipped room method has necessitated a radical change in the shape of the course. In previous years, the lecturer also asked questions to students, held impromptu discussions, provided the main content in presentations available to students. He also set assignments for writing term papers, for assessing primary documents, short answers to questions, essays, etc. Students' grades depended entirely on understanding the content (based on exams) and their ability to analyse topics or processes through assignments. for writing outside of class (usually two during the semester).

But in the flipped room method, the structure of the course and the organization of the learning process are different. At the first meeting with the students, instead of the content of the lecture to be a certain text, volume and organization of the process (as in the model "lecture - exam"), in the new method the teacher focuses on discussing texts with which students should meet - discussion "before and after". During the second meeting, a "thematic" discussion was held on a pre-provided chapter or section of the study material - three key topics and two examples of evidence to substantiate the claims of the teacher were presented. Students were encouraged to criticize the teacher's arguments, to suggest additional topics, evidence, additional information during the discussion (before and after). During the final lesson, again devoted to a pre-determined chapter or section, students had to apply what they had learned during the training by writing assignments during the lesson. According to the teacher, the flipped room method has created an opportunity for students to expand the means by which

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they have mastered / learned the content, to process it and to interact with the teacher, to understand the past.

- **Evaluation of students' knowledge**

The evaluation of student work when applying the flipped room method differs significantly from the traditional model ("lecture - exam") used in previous courses. A significant difference is that the students did not have an official exam. Instead, a combination of online assignments, in-class and out-of-class, is designed to gradually encourage students while improving overall research and writing skills. In particular, the following were used:

- 11 short questionnaires with multiple choice during the semester, to each of which the students answered online (with a three-day deadline);
- students had to demonstrate their interpretive abilities 11 times through writing assignments during classes;
- short extracurricular writing tasks.

In the first two of the cases described above, the students had 50 minutes each, and the following condition was set for them: based on the discussions in the class and the texts assigned for acquaintance, to write an essay covering the Origin, Themes and Heritage of X, where X is the topic covered in the relevant section and discussed during the previous two lessons.

One-on-one discussion approaches are often used during school hours to analyse evidence and write an essay. The flipped room method has enabled the teacher to spend more time explaining and discussing issues with the participation of students.

In order to determine the students' satisfaction with the application of the flipped room method, a survey was conducted through 32 questions, which they could answer voluntarily. It was conducted not by the teacher himself, but by his colleague. Out of 110 students in total, 88 answered some or all of the questions. The results show that when using the flipped room method, students predominate who believe they have learned more, that discussions are the most effective form followed by essays. But some students noted that they were overly focused on writing an essay instead of spending more time learning historical content; that they

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perceived writing as more important than content. Most students accept that flipped classroom classes are effective, creating dynamics in the classes.

- **Teacher's opinion on the flipped classroom method**

The application of the flipped room method excludes traditional lectures, but also changes the conditions for stimulating spontaneous discussions and the presentation of historical content by students. This is important insofar as it was registered through the survey of students that some of them were not acquainted in advance with the assigned texts and were not previously acquainted with the content. In other words, the scope of the study content is endangered - the thematic discussion in the flipped room method encourages greater involvement of students and their communication with the lecturer, but limits the scope of the content. Daniel Murphree (2016) overcomes this by presenting students with introductory information and context, while reducing the time to discuss other issues.

The author assumes that for some lecturers the use of the flipped room model and, accordingly, the efforts to transform their courses are not worth the time or effort. However, according to him, this model provides both expected and unexpected rewards, and in general he himself has fulfilled his pedagogical goals. As the most significant, he defines the possibility to rethink the relationship "student - teacher - content".

4.7. Good practice in teaching psychology (general education course) by the flipped classroom method.

- **Under what conditions is the flipped classroom method applied**

The introductory course Elements of Psychology (University of Oklahoma) covers a diverse set of topics. During the training, students learn that psychology is a science that relies on the scientific method to generate new knowledge about human behavior and thought processes. One of the goals of the course is to help students understand that psychology is everywhere and involved in everything around them.

Many of the students participating in the course are not majoring in psychology, as this course is general education. It is often the only introductory psychological course, and as realistic as it is to expect that not everything in the course will be memorized (all information taught),

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lecturers seek to acquire skills from students - the ability to critically analyse the research findings presented in popular media that could serve them to succeed in their future courses or careers. Therefore, on the first day of flipped room training, students were encouraged to discuss what they expected to learn in the course and to generate ideas on how these topics could be useful in their chosen main or future career.

Another goal of the course is to help students realize that psychology is a science in which new knowledge is generated through research. Students should learn about the scientific method, be encouraged to think critically about the psychological research mentioned in pop culture, learn to recognize that theories can change as future research reveals new evidence.

The ultimate goal of the course is to encourage student success and development. For example, students have the opportunity to better understand how memory works by attending a seminar that covers research-based tips for improving learning. All students can also participate in weekly sessions "Work Centre".

Two lecturers from the faculty teach in two large streams (400–450 + students), and the classes are twice a week for 75-minute lectures. One of the challenges to them is related to the large number of enrolled students, which makes it difficult to track the mastery of concepts by individual students and understanding the material. Another challenge is finding ways to help students process concepts at a deeper level of understanding, rather than relying on memorization to learn terms and definitions.

A major challenge for students enrolled in large lecture streams is that they have limited opportunities to communicate directly with the lecturers and discuss with them some parts of the course content that are unclear to them. Often students are reluctant to ask questions to hundreds of their peers. They also try to apply the concepts from the material taught to real scenarios, and in most cases, this is new to them and they are not well acquainted, but rely on memorized facts.

Teachers are motivated to apply the flipped room method in the hope of providing students with a deeper understanding of the content by providing conditions for individual pace of learning outside the organized lecture hours.

- **Methods used**

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To implement the flipped room, the content was first rethought as topics and volume, which was helped by students who had already passed the course in previous years.

Video clips of mini-lectures were then developed, which were published in the LMS and used as a substitute for traditional lectures. These video lectures provided an opportunity for students to watch and observe segments of the material that they found particularly difficult or engaging. An assistant has created an online tool for tracking students' mastery of the content of mini-lectures.

Students were divided into small groups to post on the online discussion board and interact with assistants in a smaller virtual room. All this is dictated by the hope that online discussion groups will give students the feeling that they are in a small group despite the reality that they are in a large course of 400 people. Numerous discussion topics are provided for each unit of study, so that students can flexibly participate in the discussion of topics that are inherently interesting to them. Assistants actively participated in the discussions to encourage students when needed.

One of the assistants also created an interactive concept map for each chapter of the textbook using the Prezi software (www.prezi.com). These interactive concept maps have allowed students to see the interrelationships of understandable concepts within a chapter and many concrete examples of the relationship between concepts and everyday life. Another assistant created short questionnaires (a choice of several possible answers) to help students determine their level of understanding of concept maps.

- **Students' evaluation on teaching through the flipped classroom approach**

For feedback, students are invited to complete optional, anonymous surveys, both in the middle of the course and at the end of the course. The results of the research are that most students have evaluated the flipped room course as engaging, high quality and effective. One of the highlights of a mid-semester survey is the answers to the most useful in the course. Some students appreciate the online course, while others prefer working in class. A number of students have commented that they would prefer the course to be entirely face-to-face without online components. The hybrid component of the course, which included reduced time to work together during class, required students to be independent learners. While many of them apparently enjoyed and thrived in this environment of independent learning, others felt

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difficult, had difficulty coping on their own, and did not appreciate the benefits. There was also an element of culture shock from the unknown and unusual - several students noted that the course was not what they expected and was very different from their high school experiences. This breach of expectations could lead some students to form negative impressions of the form of the course.

However, the interaction between teachers / assistants and students is highly valued, especially in the part of returning exam materials and assignments so that they can be useful for learning - students say that they received inviting feedback for online questionnaires, exams during class and essays outside classes. Given the large number of trainees in the course, this required good coordination of the work of many assistants.

- **Teachers' opinion on the flipped approach**

Thompson & Martin (2016) suggest that, firstly, students should be informed in advance that the flipped method will be used in their education. The second is especially important, related to the need to consider the content and form of the course as a scope and level according to the specifics / characteristics of students. They are hesitant whether the method is more suitable for advanced students within higher levels of specialization or for a general education course for new students. It seems that in the flipped room method the level of interest on the part of students in an introductory course (general education) decreases.

The authors share that they would prefer to apply the method in smaller content and number of students in courses, in order to be able to track the success of students and the difficulties they encounter in learning the material. They continue with a proposal to provide such an organization of extracurricular work for students, which considers the amount of independent work (perhaps larger in the flipped room method than in a traditional course), as well as more clearly defined paths to success in the course (individual student pathways for mastering the material). Some students said that they felt overwhelmed by the amount of material they had to read and process.

Other recommendations are the following:

- Some of the students have indicated that they prefer the mini-lectures to be delivered not through video recordings, but by the teacher himself.

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- It is good practice to create short lectures that cover a small amount of information. Here, the authors recommend creating videos that cover only one basic concept, because that way students are more likely to watch the entire lecture.
- It should be clear to both students and teachers that what happens in class is not just for "fun", but that activities are evaluated in some way.
- If a teacher is considering applying the flipped room method, one should be aware that it needs to invest a lot of time in creating new course content, planning and providing active learning activities. The authors recommend that this should be considered first for a small part of the course (e.g. one topic, one course unit).
- Students should be informed by the teacher what are the motives for applying the flipped room method.

4.8. Best Practices for Flipping Marketing Courses

- **Under what conditions is the flipped classroom method applied**

The Market Research course is part of the mandatory preparation of all students majoring in Marketing at the College of Business at Central Michigan University. Central Michigan University is among the 100 largest public universities in the United States with more than 20,000 students. The content of the course covers various research methods (both qualitative and quantitative). Data analysis and the assimilation of various statistical methods is a major part of the curriculum.

Very often in this type of courses the textbooks are very technical in nature and can demotivate and repel most undergraduate students. As a result, many students simply do not like the curriculum (i.e. theoretically presented research methods and statistics), although it is important for their future careers in marketing.

Active learning is essential to achieving higher education according to Bloom's taxonomy - the levels of creation and evaluation - which are extremely important skills for marketers. Unfortunately, active learning, although often leading to better results, takes up much of the limited time teachers have. The main question we are looking for an answer to is how can teachers "cover" the material in lectures and then build in students the skills they need through learning activities / active learning /? The answer is in the flipped classroom.

- **Methods used**

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Different forms of podcasting have been used to apply the flipped approach. PowerPoint slideshow with narration is the most common format for preparing podcast lectures. A voice recording is added to each PowerPoint presentation slide using PowerPoint software. After the lecture is recorded, appropriate background music is added that corresponds to the topic of the lecture. This is an effective approach that students approve of and that is easy and convenient to create.

Another format for turning is the talk in front of the whiteboard. This model includes a video of the lecturer presenting the lecture in front of a whiteboard. As with the first format, background music is added after the recording to increase student engagement. The students commented that they like this format because they add variety to the types of lectures and allow them to see the face of their professor talking to them.

A combination of both approaches is a video recording of the lecturer presenting the lecture in front of a green screen and subsequent editing in which the slides from the PowerPoint presentations are used as a background. This approach is very similar to the approach used by televisions in presenting the weather forecast. This type of podcast lectures is the most difficult to implement and is used relatively rarely. These lectures are used to add extra energy and commitment to the course, when this is particularly important, during the most difficult part of the semester and with the least engaging content.

Videos were also used, which included only text and images placed on a musical background - without the instructor speaking. These videos, which contain only text and images, are usually only two minutes long and include both a summary of the previous lecture and announcements of the content in the next lecture.

Each of these different approaches has its strengths and weaknesses. It is very important to use different styles to present the content throughout the semester so as to keep the podcast lectures interesting and engaging for the students.

- **Students' evaluation of the flipped approach**

Students appreciate the podcast lectures, time and effort dedicated to making them engaging and informative enough. Most often the training is described as strict, demanding and intensive

An additional quantitative assessment from an anonymous survey of students conducted at the end of the training showed that learning was significantly improved and more enjoyable. The final sample from the anonymous survey after the course conducted in 2010 included 98 completed questionnaires, representing approximately 98 percent of the students who

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underwent this training. Ninety-four percent of students rated the course as "highly preferred" or "preferred" (a top 2 choice on a 7-point scale).

Student grades for teaching in this course, obtained from an anonymous survey of students at the end of the semester, also improved after applying the flipped classroom approach. In the semester preceding the introduction of flipped classroom instruction, students' overall grades for this course average 3.54 on a 4.00-point scale. After turning the classroom in 2010, students' overall grades averaged 3.87, with a statistically significant improvement.

- **Teacher's opinion about the flipped classroom method (Garver, 2016)**

Studies show that human attention is limited and that the human brain will lose focus after 10 minutes, unless there is a change in stimuli (Medina, 2010). Given this research finding, the teacher has created short video lectures, not longer than 10 minutes, but very often, even shorter. However, this is not always feasible and is a good guideline rather than an obligation. A review of the practices of various organizations that deliver great content by broadcasting videos or podcasts (e.g., Apple) will reveal that most of their videos are two minutes or less.

This suggests that instructors need to break their content into smaller pieces and then construct a sequence of this fragmented information in an appropriate way. This course initially used a 20-minute podcast lecture to ask eight types of quality questions. When tuning these podcasts, the speaker replaced it with eight podcast lectures - one for each type of question - that lasted about two to three minutes.

Eighty-four percent of students strongly preferred shorter podcast lectures, suggesting that it was easier and less embarrassing to attend a two-minute podcast lecture than a 20-minute one. In addition, focused podcast lectures make it easier for students to review the material in preparation for exams and project work. This has an additional benefit for teachers as well.

Although it is more difficult to manage a larger number of podcast lectures, they are easier to reuse in different courses.

4.9. Flipped classroom method in the intermediate course on microeconomics

- **Under what conditions is the flipped classroom method applied**

The Microeconomics course is part of the compulsory preparation of all students majoring in Economics at the Metropolitan State University of Denver. Metropolitan State University of Denver is a public university offering bachelor's and master's degree programs. It enrols

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approximately 22,000 students. The content of the course is highly mathematical in nature and students find it one of the challenging courses in the bachelor's programs in Economics.

Too often in this type of course, textbooks contain too much math and can demotivate and repel most undergraduate students. Traditionally, this course is taught in the form of a series of theoretical lectures.

- **Methods used**

The methods used in this flipped classroom include reading guides designed for students' self-preparation, online videos of lectures on selected topics, limited real-time lectures, class discussions, short comprehension quizzes, tests containing multiple-choice questions, related to homework and three exams. The reading guides looked like detailed outlines of textbook chapters. Students were invited to prepare abstracts on specific study content. As expected, just reading a text will not be enough for students to understand the basic concepts embedded in the curriculum. The texts are supplemented with an online video explanation of them. Most often, this technique is used for graph-related explanations or to demonstrate problem-solving in a step-by-step manner. Most often, these are videos created as slide presentations as a visual component and voice narration as an audio component. The videos used in this particular case were created using free online software called Screenr (www.screenr.com). From Screenr, teachers can upload their videos directly to YouTube or download them as a file for publication on the e-learning platforms they use.

In this way, students could pause each of the videos while taking notes on them or watch them as many times as necessary to grasp the concept.

Each lesson of this training began with a short quiz test (no longer than five minutes, usually five to seven questions) on the learning content contained in the reading guide and related videos. Students are allowed to use the abstracts prepared by them during these tests.

The tests are electronic, designed to be relatively easy and are evaluated automatically after solving them. Their job is to ensure that students are prepared for class. After completing the test, the correct answers are discussed within the class as a way to better understand the material and further clarification when necessary. Discussion of the answers takes five to ten minutes, depending on the students' questions.

This way of working allows the main part of the time of the class to be devoted to graphic interpretations and work with long problems. For this purpose, both working with the whole group of students and dividing them into smaller groups can be used.

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At the end of each topic, tests were conducted containing conceptual questions with a choice of several possible answers in the format of traditional homework. These tests, which usually contain about 30 questions, are conducted online and automatically graded. In solving these tests, students have the right to use their textbooks, as well as any notes they have taken.

- **Students' evaluation of the flipped approach**

Initially, many students are sceptical. There is a natural resistance caused by the fact that they have to prepare diligently for each lecture and many of them openly complain about it. They (rightly) perceive that this course requires more and constant learning. By the end of the semester, most students are positive about the availability of videos online, but note that they have to read text and take notes. Universal tests at the beginning of the class are hated.

At the end of the course, the student opinion is already positive. The reason for this is that students appreciate that the structure of the course forbids them to "fall behind" and prevents them from failing during the exam.

- **Teacher's opinion on the flipped classroom method** (Sauer, 2016)

In terms of content, the flipped version of the course presents more material than when taught in the traditional way. Because students' initial encounter with the content takes place outside of class, students are given the freedom to study at their own pace, as long as they are prepared by the scheduled date of each lecture. The classes are dedicated to students being able to understand the material they first encountered on their own.

A flipped classroom involves an increased time cost for both students and faculty, and students routinely complain about this. However, from the point of view of the learning process, this is a positive consequence, as the majority of students in a traditionally taught class spend less time than necessary to learn the material.

4.10. Creating Active-Learning Environments for Students in the Creativity Class

- **Under what conditions is the flipped classroom method applied**

The course "Introduction to Applied Creative Thinking" provides students with the opportunity to develop practical applications and solutions for the use of creativity in academic and business situations. It is part of the preparation of students from Eastern Kentucky University. Eastern Kentucky University is a regional university in Richmond, Kentucky with more than 16,000 students.

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The course "Introduction to Applied Creative Thinking" situates students in an environment of active learning. Students study the strategies and theories of applied creative thinking at Noel Studio for Academic Creativity, the institutional, administrative and pedagogical home of the course. The space has mobile furniture, the furniture and the overall interior are in bright colours, which provide students with the most engaging environment on campus.

The application of the flipped classroom method in the course "Introduction to Applied Creative Thinking" has three main goals:

1. To provide more time for active learning activities and discussions, and to remove barriers to the use of technologies to promote active learning focused on activities and projects during class.

2. To improve the interaction between the teacher and the students. By focusing on projects and active learning activities in the classroom, new opportunities appear to create informal contact and effective feedback to each other. It is easier to highlight the challenges that students face and improves the ability of the teacher to work with them on these issues.

3. To improve the interaction between the students themselves. Replacing lectures with active learning activities in the classroom, which is made possible by the flipped classroom, allows students more time to work together, in pairs and in teams, to identify and make creative decisions. Thus, students spend most of their learning sessions in class experimenting together on various creative concepts that they have read or studied through online modules. The flipped model of the classroom creates more opportunities for student interaction in the time spent in class.

- **Methods used**

Online modules are created in which students can access the study materials for the course. Each module is related to a specific lesson and consists of text materials that provide a background for the creative concept, videos or presentations and an interactive task (project) that will be worked on during the lesson.

Through classroom activities, students demonstrate their ability to use a variety of collaborative strategies by applying creative concepts learned through online materials. For example, in a module that focuses on the creative concept of "play", students can explore many different options that are described in the learning resources of this module, including video games, online games, board games, child development games and serious games. An important

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part of the learning process is the requirement for students to explore beyond these pre-defined categories to find other forms of play in the workplace or academic environment.

Students get acquainted in advance with a specific chapter of the textbook of the course and submit examples in class for discussion and demonstration. Thus, most of the time in the classroom is devoted to the creation of interactive games - first "sketches" and then fully functional prototypes that students can demonstrate. Thus, students spend most of their time in class applying concepts, asking questions and working in a team. The flipped classroom approach encourages active, project-based learning.

- **Students' evaluation of the flipped approach**

Students evaluate the achievement of two main objectives of the course:

1. "Learning to apply course materials (to improve thinking, solve problems and solutions)."

2. "Development of creative capacities (writing, invention, design, performance in art, music and drama, etc.)."

Giving their feedback on the traditional approach used in 2012, students rated the first goal as 3.8 on a 5-point scale. At the end of the course using the flipped classroom method used in the fall of 2013, students rate the same essential goal for the course as 4.6 on a 5-point scale.

Giving their feedback on the traditional approach used in 2012, students rated the second goal as 3.8 on a 5-point scale. At the end of the course using the flipped classroom method used in the fall of 2013, students rate the same essential goal for the course as 4.6 on a 5-point scale.

- **Teacher's opinion on the flipped classroom method**

The author of the article (Carpenter, 2016) considers the fact that the projects developed by the students flipped classroom are better thought out and in-depth than those presented by students in the traditional course. He notices that class time devoted to discussing the various strategies and theories of applied creative thinking and applying them to specific project-based contexts contributes to raising and improving the overall quality of student work. In the flipped classroom, teachers can provide more specific and contextualized feedback to students and they are better able to implement projects in small groups or in pairs. By comparison, students who took the Introduction to Applied Creative Thinking course in the fall of 2012 had much broader project parameters and were expected to do most of their work on them outside the classroom and with a lot of less direct feedback through class seminars and teamwork.

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The author of the article also observes that the group of students who went through the course "Introduction to Applied Creative Thinking" by the flipped classroom method show more continuity in their knowledge from one meeting to the next, while students in the class who have passed the traditional form of education demonstrate the severance of the connection between classroom work and their independent project-based work.

4.11. Applying flipped method in Sustainability Marketing and Circular Economy course

P. Strömberg (2020, p. 1) describes his own experience to encourage students to more interactive learning online. As he states "one of the big problems that the teachers face is *how to involve, activate and encourage students* in their own learning process online". He provides a Salmon (2002) five-stage-model of online learning, which includes the following steps: 1) gaining access and motivation to online learning; 2) online socialization and bridging different social and cultural backgrounds; 3) information exchange; 4) construction of knowledge; and 5) self-development with links outside the online conferences.

The purpose of his development project is to facilitate interactive online learning in Zoom and Canvas at the BA-course in Sustainability Marketing and Circular Economy. He mentioned the flipped classroom as a solution for transforming pure lecturing into playful discussions, although he didn't apply it.

According to him the interactive e-learning must include digital encounters with the teacher and be-tween students (Ibid., p. 7). He made use of two student response systems, *Mentimeter* and *Kahoot*. "In the case of Mentimeter, the purpose was to initiate a discussion and of co-creation statistics (on the use of ecolabels) while socialising. In the case of Kahoot, the main goal was to review the lecture in social and playful way" (Ibid., p. 10). Furthermore, he included two online collaborative whiteboards such as *Padlet* and *Zoom Annotate* has been tested out during the semester. He conserved also that the *breakout rooms* of Zoom are perfect for interactivity between students and in their contact with the teacher.

The brief summary of the lecture on Ecolabelling is the following:

1. He recorded and posted an introducing video in which he appeared in a supermarket, asking himself which detergent to choose while looking for ecolabelling.

2. After that the recorded Zoom-lecture started with welcoming the students, while presenting the topic, content, learning goals, and the schedule of the lecture. The lecture started with discussions in breakout rooms, and then followed by four questions in Mentimeter.

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3. PowerPoint on shared screen was the main presentation form during the whole lecture.

4. At the end, they discussed the usefulness of ecolabelling. This discussion was followed by an exercise in Padlet, responding to the given question.

5. The lecture ended with a wrap-up and a Kahoot-quiz.

From this experience he concluded that:

- Kahoot (62.5%) and Mentimeter (62.5%) proved to be the most motivating for the students.
- *Breakout rooms* was appreciated by most students.
- *Padlet* was an exercise that the students were positive to, but which one could have spent more time on to make it more relevant.
- Students are positive about the use of videos.

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5. THE EXPERIENCE OF TEACHERS FROM THE SOFIA UNIVERSITY *ST KLIMENT OHRIDSKI* TO APPLY THE FLIPPED CLASSROOM APPROACH

5.1. Sofia University St Kliment Ohridski

Sofia University *St. Kliment Ohridski* (SU) is the first Bulgarian university. After its founding in 1880, it became an authoritative educational and research institution in the country and a fully developed European type of university. Today the university is the main national higher education, research, cultural and information centre with high international recognition. It is a country leader in the number of student and teacher mobility, as well as in the establishment of the European Higher Education Area. Currently, the structure of the Sofia University is formed by 16 faculties and 3 departments, other independent units, research and support centres, and a network of libraries. Students are trained in these faculties in all educational and qualification degrees - bachelor, master, doctor and continuous education.

The methods used by the teachers in their classes depend on their experience, preferences and specifics of the discipline. In the prevailing cases, the teachers make the most of the opportunity for autonomy and independent choice. The main goal of each trainer is to keep the students' attention and to stimulate them to actively participate in the learning process. Applying approaches to retain students' attention, activating them through individual or group assignments, providing opportunities for individual expression, supporting with basic learning materials and selected additional sources of information in various formats are not new to the academic community.

Although in recent years the term *Flipped Classroom* has gained international popularity as a modern, new educational technology, many of its components have been used in the educational process for a long time.

5.2. Survey of teachers from Sofia University on their education practices

In support of this statement are the **results of a survey** of teachers from Sofia University, conducted within the project "Activating Students in Online Classes" (Erasmus +, KA226 - Partnerships for Digital Education Readiness) in the period 10-20 June 2021. The period coincides with the end of the summer semester and the beginning of the exam session, which

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allows the respondents to have a real idea of the effectiveness of their learning process in the 2020-2021 school year.

The questionnaire was developed by the project team in two languages - Bulgarian and English (Appendix 1). A link for online access to the e-questionnaire was sent to all 16 faculties of Sofia University with a request to distribute it among all teachers at the respective faculty. The total number of teachers at Sofia University for the academic year 2020-2021 is about 1600 people.

Participation in the study was voluntary and anonymous. The members of the team are of the opinion that the decision of the individual respondents to participate in the survey is a kind of indicator of their interest in Flipped Classroom and the application of this method in teaching.

5.3. Analysis of the survey results

The total number of completed questionnaires is 103 from 14 faculties, i.e. 6.4 % of the teaching staff of Sofia University took part voluntarily. Lecturers from the Faculty of Classical and Modern Philology (19 people) predominate, followed by those from the Faculty of Philosophy (15 people), the Faculty of Mathematics and Informatics (14 people), the Faculty of Chemistry and Pharmacy (11 people). The smallest is the representation of the Faculty of Journalism and Mass Communication, the Faculty of Geology and Geography and the Faculty of Slavic Philology (Table 1).

Table 1. Number of respondents according to the faculty

Faculty	**Number of respondents**
Faculty of Classical and Modern Philology	19
Faculty of Philosophy	15
Faculty of Mathematics and Informatics	14
Faculty of Chemistry and Pharmacy	11
Faculty of Pedagogy	9
Faculty of Biology	8
Faculty of Economics and Business Administration	7

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Faculty of History	4
Faculty of Educational Studies and Arts	4
Faculty of Physics	4
Faculty of Law	4
Faculty of Slavic Philology	2
Faculty of Journalism and Mass Communication	1
Faculty of Geology and Geography	1
Total	**103**

The answer to the question "How many subjects do you teach" is dominated by three or more than three (91 people out of a total of 103, i.e. 88.3% of the respondents). From the Table 2 it is evident that the teachers who took part in the survey have a maximum workload in "more than three" courses (71.8%) and "three" courses (16.5%). This implies that teachers should make significant efforts to create the conditions for the application of ICT and online practices. The preparation of a sufficiently functional and useful for the learning process e-version of the courses requires a lot of time for development of original learning content, in different file formats.

Table 2. Number of teachers according to the number of subjects taught by them

Number of subjects	**Number of teachers**	**%**
One	5	4,85
Two	7	6,80
Three	17	16,50
More than three	74	71,85
Total	103	100,00

It can be summarized that along with the huge workload for conducting a learning process on many disciplines, teachers are additionally charged with the development and maintenance of e-content and structuring of e-courses. In addition, this overload is often without or for a nominal compensation.

However, the answer to the question "For how many of the disciplines you teach have you developed an electronic version in the electronic portal of Sofia University

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(http://elearn.uni-sofia.bg), where the Moodle software is used?" predominate the answers "for all" (78.6%).

Table 3. Number of e-courses developed by teachers in their subjects

Number of subjects	Number of teachers	%
For all subjects	81	78,64
For three	7	6,80
For two	10	9,71
For one	4	3,88
No one	1	0,97
Total	103	100,00

In general, 88 respondents (84.8%) provide the answer "for all" or at least for "three subjects". Only one teacher stated that he had not developed an e-course in the discipline he taught, but he was engaged in conducting specific practical classes in which he still used texts, audio recordings, videos, photos and more to prepare for a discussion (Table 3).

The Sofia University has been providing a common online platform for developing and accessing e-courses for more than 15 years (http://elearn.uni-sofia.bg). It is based on the Learning Management System (LMS) Moodle - open source software for management, administration, documentation, tracking and reporting of training programs, e-courses and online events, conducting e-learning and access to e-content. With the support of the University IT Centre, in cooperation with the University Centre for Distance Learning, a single online portal has been developed, accessible to every lecturer and every student from the university. In addition, some of the faculties (e.g. the Faculty of Mathematics and Informatics or the Faculty of Pedagogy) support additional distance learning platforms, again based on Moodle. All platforms of Sofia University have functionalities for e-repository for teaching and learning aids, as well as for forums, chat, virtual room, online texts, task assignments and many more.

Given the conditions created at Sofia University for distance learning and access to learning resources through a single platform, interesting are the answers to the question "Do you use other platforms and additional software for teaching online, in addition to the electronic portal of Sofia University (http: // elearn. uni-sofia.bg), where the Moodle software

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is used?". The use of other platforms and additional software was reported by 90 respondents (87,34%).

• In the predominant case, the following other platforms are listed (besides the virtual room in Moodle) for online communication during classes and video streaming: Zoom, MS Teams, Jitsy, Google Meet, Discord, Miro and others such as Viber and Skype.

• Teachers who use a variety of software to create e-learning resources also predominate: MS Office (including Office 365), Photoshop, Camtasia, SurveyMonkey, Liveworksheets, Padlet, Kialo-edu, Prezi, Kahoot.

• In the preparation of learning resources, as well as in the distance learning process itself, respondents use resources on YouTube, JStore, other scientific databases or online content sharing networks.

It can be summarized that the surveyed teachers seek to use not only the institutional resources and technologies of Sofia University, but also various other software tools, depending on the specifics of their subjects and the respective groups of students involved in the learning process. The teachers make use of alternative modern solutions for online communication (such as Zoom, MS Teams, etc.), for joint virtual work (Padlet, Kialo, Liveworksheets, etc.), for training through a game approach (Kahoot!), for the preparation of video recordings of lectures or for the demonstration of student work (Camtasia), etc.

The desire to use alternative solutions to activate students is also shown by the answers to the following question: "To what extent in your teaching practice do you use the following method: blended learning, in which students independently (outside an organized synchronous form of education with a teacher in a real or virtual classroom) get acquainted with the content on the topics of the course syllabus and the next lesson with a teacher is used for discussions, other active learning activities and checking how students have mastered the learning content with which they are acquainted independently (Flipped Classroom approach)? ".

Table 4. Number of teachers using the Flipped Classroom method

Frequency of using this method	**Number of teachers**	**%**
Never	21	20,38
Rarely	39	37,86
Often	40	38,84

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No answer	3	2,91
Total	103	99,99

Table 4 shows that the total number of respondents using the Flipped Classroom method was 79 (76.7% of all); 21 of the teachers (20.4%) state that they never use this method, and another 3 did not submit an answer. But overall, 38.8% say they use the method often, and another 37.9% rarely. Given the huge variety of specialties at Sofia University, the different disciplines, the different degrees of students (bachelor's, master's, doctoral, continuing education) and other differences, it is understandable why not all teachers use the Flipped Classroom method.

Moreover, it can be concluded that the use of Flipped Classroom in teaching is practicing at Sofia University, in accordance with the specifics of the respective specialties and different student groups. Above all, balance and efficiency are sought in order to meet the needs of students. How is this achieved? What is the structure of e-courses for the application of ICT in the learning process?

The answer to these questions has to do with the number of available e-courses and their content. The elements of the e-courses offered for selection, from which the respondents could choose with the possibility of more than one answer, are the following:

- Annotation of the course (short presentation of "what / why / when / how", what the student should know and can do after the training, what activities will be performed by the students during the training).
- Requirements to students (obligations and rights; form of intermediate control, form of final exam, form of presence and participation of students in the learning process, etc.).
- Requirements for student work (for example, requirements for the structure and design of course work).
- Main lecture topics (list with a short annotation of each topic).
- Main topics of the practical training (seminars, exercises, trainings, field practices, etc.; a list with a short annotation of each topic).
- Knowledge Map (illustration in a structured form of knowledge for orientation in the network of connections between basic concepts / facts / events related to the topics in the course).
- Glossary of basic terms (author's lecturer or reference to a recommended dictionary).

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- Teaching and learning aids on each of the planned lecture topics.
- Teaching and learning aids on each of the planned topics for practical training (seminars, exercises, trainings, field practices, etc.)
- Tests for assessment of knowledge on a separate topic of the course (two or three for the period of teaching the discipline; current control; conducted online).
- Final test (covers all material from the main lecture topics; conducted online).
- Additional multimedia content (video recording (s) of lecture (s) / exercise (s); recommended videos from other sources).
- None of the above.

The answers of the respondents indicate that out of a total of 103 respondents, 98 (95.1%) have provided access to e-courses with more than one element. Single individual elements were mentioned by only 3 respondents. The most common combination (25 respondents or 24,27%) is the following:

- Annotation of the course (short presentation of "what / why / when / how", what the student should know and can do after the training, what activities will be performed by the students during the training).
- Requirements to students (obligations and rights; form of intermediate control, form of final exam, form of presence and participation of students in the learning process, etc.).
- Requirements for student work (for example, requirements for the structure and design of course work).
- Main lecture topics (list with a short annotation of each topic).
- Main topics of the practical training (seminars, exercises, trainings, field practices, etc.; a list with a short annotation of each topic).
- Teaching and learning aids on each of the planned lecture topics.
- Teaching and learning aids on each of the planned topics for practical training (seminars, exercises, trainings, field practices, etc.)
- Tests for assessment of knowledge on a separate topic of the course (two or three for the period of teaching the discipline; current control; conducted online).
- Final test (covers all material from the main lecture topics; conducted online).

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- Additional multimedia content (video recording (s) of lecture (s) / exercise (s); recommended videos from other sources).

Another 25 respondents indicated that the e-courses offered between 4 and 8 of the above elements in various combinations, and 14 noted that they provided only up to three of the elements listed above.

And yet only:

- 11 people indicated that their e-courses contain a "Glossary of key terms (author's lecturer or reference to a recommended glossary)";

- 1 indicated that it provided a "Knowledge Map".

In general, it can be summarized that the basic minimum elements were provided by all respondents, except for 5 people who did not submit a response.

Respondents were also asked how the main topics of their e-courses were presented. The following possible answers were offered for their choice with the possibility of more than one answer:

- General presentation (covers the whole topic, builds concepts, terms, rules, etc. step by step, is characterized by brevity and clarity; provides a minimum of knowledge for the student)
- Detailed text on the topic, suitable for self-preparation
- Recommended additional texts (articles, books, parts of books, etc.)
- Recommended reading (bibliographic description)
- Recommended sources for additional information (video resources; sites with relevant information on the topic, etc.).
- Self-study tasks (including worksheets, where applicable; submitted online)
- Tasks for checking the acquired knowledge (test, essay, analysis of previously provided text, preparation for moderating a discussion on a topic set by the teacher, etc.)
- Video resources with demonstrations of relevant activities on the topic, where applicable.
- Material for preparation for participation in a discussion, workshop, etc. (according to the discipline and the methodology of the teacher)
- Materials for gamification (according to the discipline and methodology, when applicable)

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- None of the above.

The results show that for each of the main topics in the e-courses the answers containing more than one type of resource and the respective file format prevail again (95 of the respondents, 92.2% of all). The combination which prevail contains the following:

- General presentation (covers the whole topic, builds concepts, terms, rules, etc. step by step, is characterized by brevity and clarity; provides a minimum of knowledge for the student)
- Detailed text on the topic, suitable for self-preparation
- Recommended additional texts (articles, books, parts of books, etc.)
- Recommended reading (bibliographic description)
- Recommended sources for additional information (video resources; sites with relevant information on the topic, etc.)
- Self-study tasks (including worksheets, where applicable; submitted online)
- Tasks for checking the acquired knowledge (test, essay, analysis of previously provided text, preparation for moderating a discussion on a topic set by the teacher, etc.)
- Video resources with demonstrations of relevant activities on the topic, where applicable
- Material for preparation for participation in a discussion, workshop, workshop, etc. (according to the discipline and the methodology of the teacher)

However, only 4 people indicated that their e-courses contained "Gamification Materials (according to the subject's discipline and methodology; where applicable)".

Therefore, despite the established variety of content elements, the cases of provided possibility for application of Flipped Classroom prevail.

But to what extent is this method really used? The following answers were given to the question "If you use the Flipped Classroom, what teaching materials did you provide:"

- Video lectures offered by 19 people;
- Texts for acquiring basic and / or additional knowledge offered by 58 people;
- Texts, audio recordings, videos, photos, etc. to prepare for a discussion offered by 29 people;
- Rules and materials for conducting independent research, offered by 26 people;

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- Another is offered by 22 people.

The answers containing variants of the above prevail, most often a combination of video lectures, texts, materials for individual studies (including video and audio).

Asked to share their opinion on what activates students in online learning, answers were submitted by all respondents (103 people). The predominant share of respondents indicates a combination of the following:

- Case studies
- Engaging students as moderators and leaders of small teams in the preparation of group assignments.
- Balance between online and offline learning
- Videos, excerpts from movies
- Opportunities for learning at their own pace at a time convenient for students and feedback when needed
- Group tasks
- Giving examples and showing solutions, breaking lectures by asking questions, playing games or writing solutions
- Discussions
- Reports on a topic developed in a team
- Additional multimedia activities
- Tasks for individual solving
- Individual studies
- Interactive communication
- Provided instructions for the implementation of the tasks
- Periodic updating of courses and materials
- Presents the completed assignment to the other students in the form of a presentation and subsequent discussion
- Teaching behavior and his ability to combine necessary information presented in an interesting way.
- Work in groups
- Development of skills for virtual academic communication.

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- Referral of submitted materials
- Role games
- Specific cases, which are then discussed individually or in groups.
- Students should have the opportunity to prepare the assigned learning tasks, choosing the time and method of work, and the time for lectures in front of the computer is more appropriate for discussion with the lecturer.
- Joint activity with the help of interactive maps
- Creative tasks
- Tests to test knowledge
- Participation in simulation games
- Educational games
- Clear evaluation criteria

In summary, according to the obtained results, the following conclusions can be made:

A) Teachers strive to use a variety of software tools, depending on the specifics of their subjects and groups of students involved in the learning process. They cover alternative modern solutions for online communication, for collaborative virtual work, for learning through a game approach, for preparation of video recordings of conducted classes or demonstration of student work, etc.

B) Almost 77% apply the Flipped Classroom method (often or rarely) through various forms and e-resources to achieve balance and efficiency in order to meet student needs in the acquisition of knowledge and skills.

C) Out of a total of 103 respondents, 95% provided access to e-courses with more than one element, among which prevail: annotation of the course, requirements for students (obligations and rights), requirements for the student work, materials on main lecture topics and those for practical training, teaching and support content on each of the planned topics, tests for assessment of knowledge, multimedia content.

D) There is a variety of content elements on the main topics in the e-courses - a little over 92% indicate the provision of various resources regarding content, format and file format. Among them prevail: presentations (static, dynamic); detailed texts on the relevant topics and for self-preparation or with more detailed information for upgrading the basic knowledge;

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recommended additional texts and literature, tasks for self-implementation or testing of knowledge, video resources, materials for discussions.

About 10% offer a glossary of basic terms (the author's or a reference to a recommended glossary), but this is the only case of a knowledge map provided. Insofar as it has been established that such resources are of great benefit for effective learning, in the event of advanced training of teachers, specialized training may be recommended for the acquisition of skills in creating and using these in the learning process.

At this stage, there are few cases of using materials for gamification through modern ICT, although the game approach at Sofia University has long been used by many teachers, but by traditional means.

E) The cases for application of components of the Flipped Classroom prevail - approximately in 1/2 of the e-courses. Obviously, the use of Flipped Classroom in teaching is already a practice for teachers in the Sofia University, but in accordance with the specifics of the respective specialties and different student groups.

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6. BEST PRACTICES OF LECTURERS FROM UNIVERSITIES INVOLVED IN THE PROJECT

6.1. Applying the flipped classroom approach to teaching about language policies

(Dr. Lid King, The Languages Company, London, UK & Assoc. Prof. Nikolina Tsvetkova, PhD, Sofia Unuversity St. Kliment Ohridski)

1. EU Language Policies (Introduction to Multilingualism)
Online environment: Moodle (the regular university LMS)

2. First delivery 2019/2020, Spring Semester, second delivery 2020/2021, Spring semester – 136 students altogether, third delivery 2021/2022 – 25 enrolled students

6.1.1. Rationale

The immediate impetus for the development of a more flexible learning environment, using a 'flipped classroom' approach as an element of what has also been called 'blended learning' was the onset of the Pandemic in early 2000. We were working as part of a higher education consortium (EURASIA, №585968-EPP-1-2017-1-BG-EPPKA2-CBHE-JP), covering 7 countries and 2 continents seeking to develop joint courses on a whole range of issues relating to Europe and the European Union. Clearly in the spring semester of 2019/20 and in 2020/21 conventional classroom teaching - typically the face to face lecture or seminar - was not possible, and so we had to develop alternative approaches which would work in the new distanced circumstances. An obvious solution was to make use of the online environment, adopting a blended approach to learning which incorporated a 'flipped' methodology.

Although this was part of a quite ambitious international project the key elements are relevant to more modest situations within a single institution. For indeed many elements of the flipped approach have always been part of the repertoire of teachers. Even at school level we have been asked to read a text at home in preparation for the lesson, or perhaps to check some vocabulary or formulae. We might also revise what has been learned in class and summarise the main points for 'homework'.

So, what is new about 'flipping' the classroom in the 21st century? There are probably two main things to consider, one to do with pedagogy and one with technology. From a pedagogical viewpoint we are currently much more in tune with a 'student-centred' approach

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to learning. We increasingly see the teacher's role as one of 'guiding' the learner to 'discover' meaning and make it her own, rather than 'instructing' and handing down static knowledge This does not negate the teacher's role as an expert. Rather it offers a more complex and varied route for the learner's voyage of discovery which requires more flexible skills from the teacher as guide. It is very much related to contemporary thinking about learner autonomy. As far as the technology is concerned, we now have available - particularly through the power of the internet - an incredibly varied range of rich material and of ways of accessing and using such material. Not only that, but our students are familiar with this world in their everyday life. These 'netizens' of the 21st century are used to searching for information, engaging in joint endeavours, discussing across country borders, in ways that were inconceivable even 20 years ago.

If the pandemic meant that a blended approach was unavoidable, this was also building on something which already existed. The Pandemic has just brought it into greater focus and enabled us to learn lessons more quickly.

We see many benefits to using this approach for both learners & teachers: it caters for different approaches to learning not least by the possible use of a range of rich interactive multimedia; it allows for more individual attention to learners by enabling teachers to use materials that are more tailored to learners' needs; it encourages a deeper approach to learning since learners are able to view a video or read a written text several times without feeling pressurised; it can increase social interaction in the classroom (even a 'virtual' one) since there can be more time for learners to work together and communicate. In addition, when combined with a significant online input as in our case it can give learners 'just-in-time' support both in a synchronous way - through immediate online feedback and the availability of learning tools - and asynchronously - through video conferencing, fora and chat-rooms. Finally, a flipped and blended approach encourages learner discovery through surfing the net, and the nonlinear nature of an online course can allow them to wander around the material and even to jump from one activity to another, choosing their own learning journey.

There are also benefits for institutions : such an approach facilitates better use of resources (as these can be employed more flexibly and more cost-effectively according to learners' needs); it gives a ready opportunity to leverage the existing technology learners have at hand, so making learning an easy and interesting process and also an everyday occurrence

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and not just what happens within the confines of the classroom; finally it allows scalability of programmes since any programme can be delivered to audiences with differing needs spread across different geographies, without affecting the consistency and quality of learning.

6.1.2. Description of the Course Units

How then did we apply these general principles in the case of the course on EU Language Policies (Introduction to Multilingualism in Europe)? This course was tailor made and conceived as being a flexible course to be used online.
It can be used by an individual working entirely at home with input from a teacher/tutor as required, or by groups of students working together online or indeed in a classroom setting. It consists of 5 Units, each in turn divided into 5 "steps". The course corresponds to 30 hours of in-class study and 60 hours of independent work equaling 3 ECTS.
Since it is an online course, decisions had to be made in advance on the most appropriate activity for each stage. This raised one of the major issues to consider in relation to a flipped classroom, or in the use of blended learning:

WHAT IS FLIPPED? WHAT IS THE BLEND?

In other words what are the most appropriate activities for a student to engage in through self-study outside the classroom, and what is best done when interacting with a teacher or with other students? Related to this is the question of which medium is best for which kind of activity.

The same questions need to be answered whatever the context or format of the learning experience and indeed may be even more straightforward to resolve in a more conventional learning environment which is face to face, online and also involves classroom and home activities. The questions are however the key ones for the teacher and course organiser.

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In the case of the Introduction to Multilingualism in Europe course we devised 5 Units:
1 - Multilingualism in Europe - an Overview
2 - A Multilingual World
3 - Multilingual Policy
4 - Personal Multilingualism or Plurilingualism
5 - The Challenge for Educators

In addition, there was a challenging Multiple-Choice quiz covering the whole course after completion.

Each unit was divided into 5 steps with different activities in each one. Here we will briefly consider Unit 1, and some of the different activities involved. We also suggest how this very specific course could relate to a more generalisable practice using a flipped and blended-learning approach.

The course is integrated in the regular Moodle LMS of Sofia University. Given the novelty of having to work entirely online imposed by the Pandemic emergency situation, we decided that it is best to resort to an environment which most (although not necessarily all) students would have already used in other disciplines. Another reason for choosing Moodle is the multitude of in-built tools for creating activities such as different types of gap-fill, multiple-choice, matching, etc.

6.1.3. Preparation

There is first a preparation stage. This can apply to each of the "steps" in the process, as preparation is an ongoing activity to be undertaken by the learners, not one to be completed and finished with at the beginning of the course. In this case the students are asked firstly to think about what they already know or think about a topic, so we begin from where the students are. -

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Unit 2 - A Multilingual World ►

Unit 1 - Multilingualism in Europe: An Overview

STEP ONE- Overview

In this unit you are going to learn about **multilingualism**, in Europe and beyond. Multilingualism is a guiding principle of the European project and in many ways, it has been since its inception.

Activity 1 – What is multilingualism?

(i) First think about what multilingualism means for you (or discuss with a colleague if you are working in a group).

(ii) Write down some notes in English or in your own language if you prefer.

Fig. 1: Unit 1, Step One – an example of Preparation

6.1.4. Presentation

Next, the students are asked to listen and watch a video in order first to identify the gist and then to establish a more detailed understanding of the issues involved. They are able to pause the video and to repeat it, especially important as they were not always accessing texts in their home language. You may note that we also give prior guidance on key words for the same reason.


Unit 2 - A Multilingual World ►

Unit 1 - Multilingualism in Europe: An Overview

STEP ONE- Overview

In this unit you are going to learn about **multilingualism**, in Europe and beyond. Multilingualism is a guiding principle of the European project and in many ways, it has been since its inception.

Activity 1 – What is multilingualism?

(i) First think about what multilingualism means for you (or discuss with a colleague if you are working in a group).

(ii) Write down some notes in English or in your own language if you prefer.

Activity 2 - Identifying the main points

You are now going to watch an extract from a talk by Dr Lid King, a European expert, speaking about multilingualism.

(i) Before listening to the video recording check that you understand the meaning of these key words:

Challenge/ Diversity/ Identity/ Fanaticism/ Xenophobia

Functional/ Social/ Cultural/ Humanist/ Paradoxical

(ii) While watching the video recording note down the main points being made.

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Fig. 2: Unit 1, Step One – Activity 1 & 2

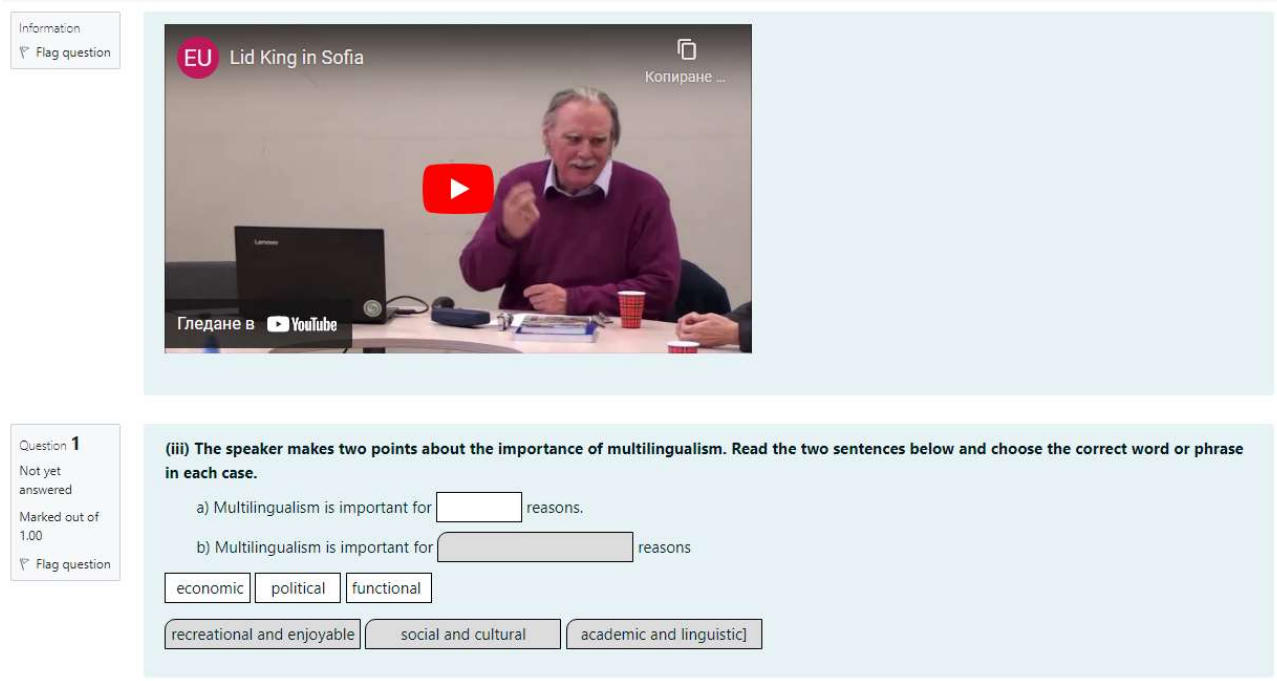

Fig. 3: Unit 1, Step One – Activity 2, drag-and-drop exercise

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Fig. 3: Unit 1, Step One – Activity 3, multiple-choice exercise

All of these activities are designed to be carried out by the student in advance of a more formal lesson and outside the classroom setting. It is also important to include some kind of checking activity so that students refer back to and compare their original ideas.

Further input (presentation) was provided through a longer written text and activities aimed at identifying key words and concepts and on checking understanding.

It should be stressed that this presentation or input stage can involve many media and a range of different activities, which can be carried out collectively, but very often before a more formal 'lesson'. Some of these activities are listed in Section 3.4 below.

6.1.5. Practice or consolidation

A key aspect to any learning is the student's ability to practice and ultimately internalise the new knowledge. It is possible to do this online in isolation, but some level of interaction is normally preferable and a classroom is an ideal context for such a process. (In the absence of a face to face classroom we found solutions through online chats, virtual meetings, seminars,

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etc.). For the Multilingualism course we used a range of activities, such as reviewing prior ideas (as above), comparing meanings, discussing, comparing notes and seminars (which can again be online).

This is an example taken from a later "step" in Unit 1. After reading (and listening to) a number of texts students are asked to use a framework in order to summarise key points.

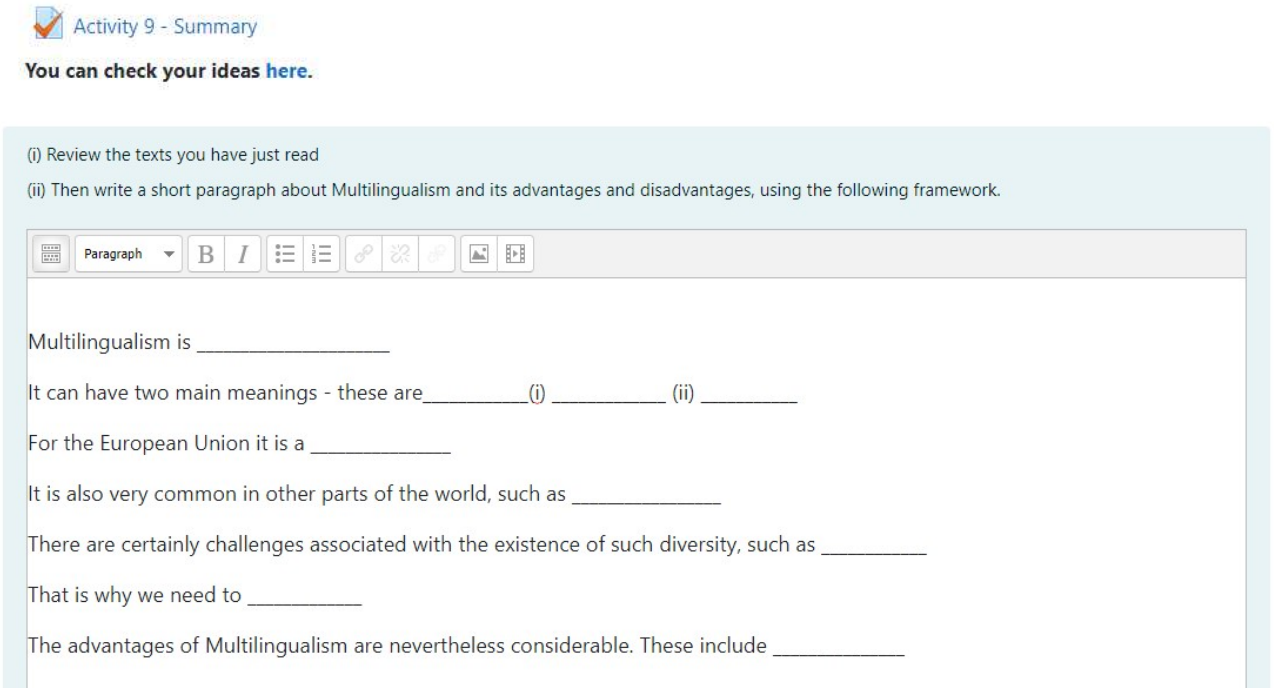

Fig. 4: Unit 1, Step One – Activity 9, Summary – a guided writing exercise

In this case, model answers had to be given online in the form of Tutor comments (see above) but in a classroom setting this would more likely lead to an interaction between teacher and student and indeed other students. Very often there is not one single correct answer.

6.1.6. Reviewing

At various key stages throughout the course checking activities are introduced. Given the online nature of the whole course this tended to be self-correctable - Gap filling, Multiple choice, Drag and drop for example. These are not necessarily simple and some of the 'quizzes'

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are rather challenging. We also attempted some more open-ended questions - with model answers available for the students to make comparisons. These were then discussed in the live sessions or via the provided online forums. Clearly in a face to face situation direct question and answer would be simpler to implement. However, depending on the settings of the LMS, it is possible to record the live sessions and students can access these recordings later when they need to go back to a certain part of the class discussions.

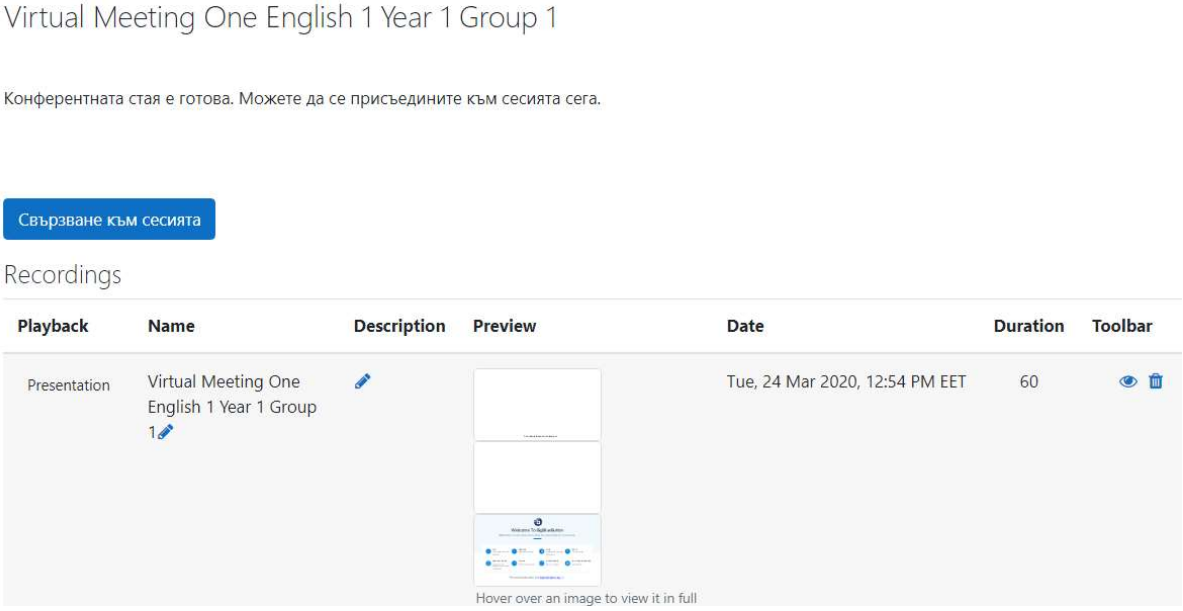

Fig. 5: A live session carried out via Big Blue Button with an accompanying recording

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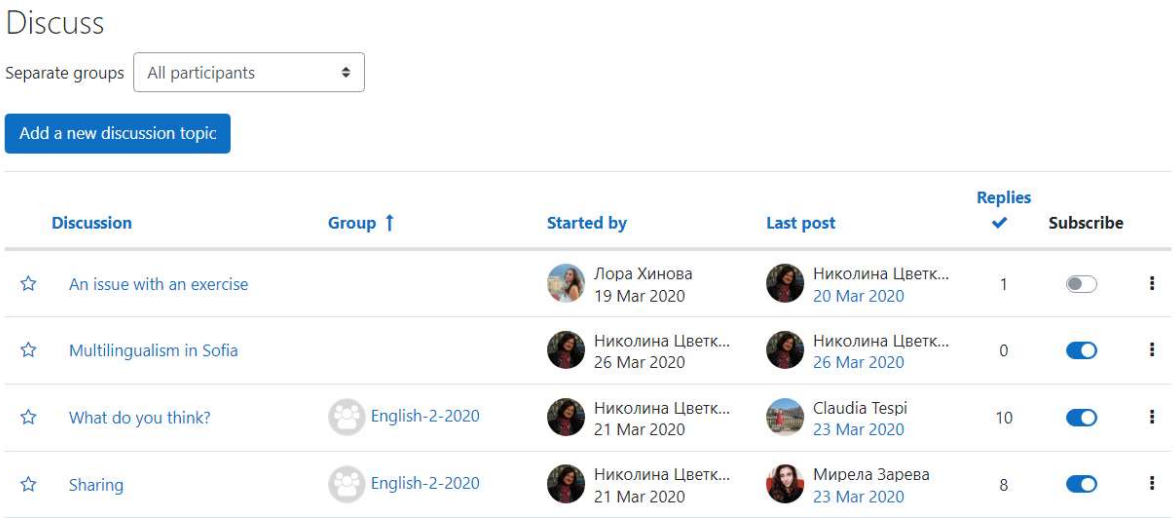

Fig. 6: The online fora for Unit 1.

As seen in the figure above, the online fora on the course serve several purposes. They are used as a way to:

- Summarise what has been learned, i.e. see the *What do you think?* and the *Sharing* threads.

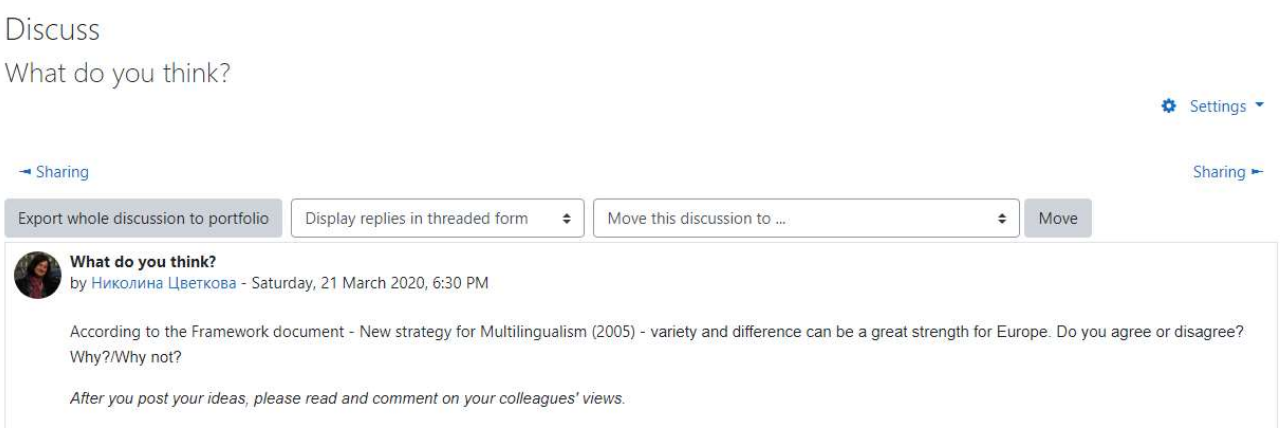

Fig. 7: An asynchronous discussion summarising Unit 1.

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- For students to ask for help or clarification on some of the 'flipped' elements of the course and receive it from either the teacher or another student – see the thread *An issue with an exercise*.

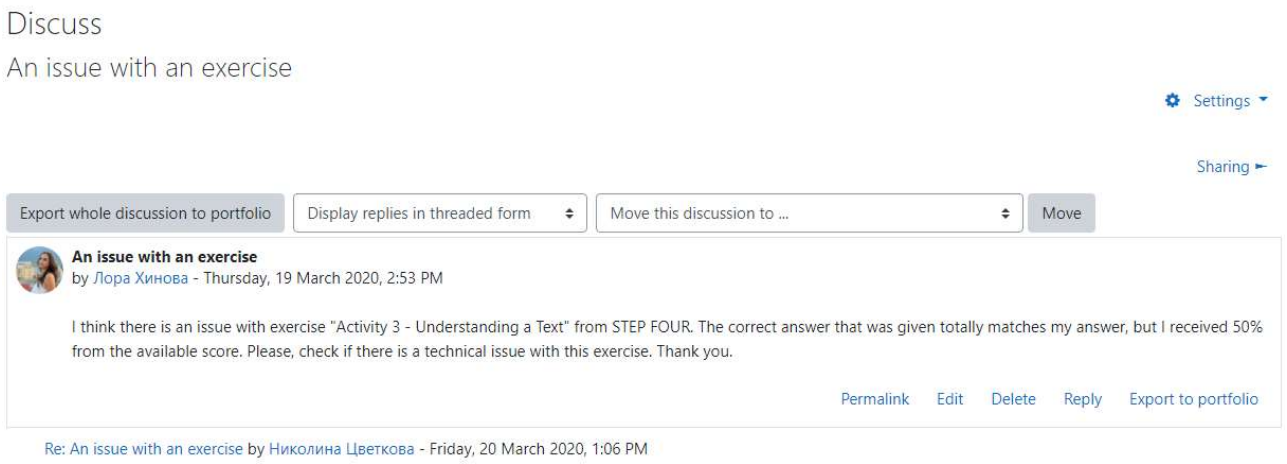

Fig. 8: A discussion thread initiated by a student to ask for help

- To expand on a question/issue/further idea which appeared as a result of the class discussions – see the *Multilingualism in Sofia* thread.

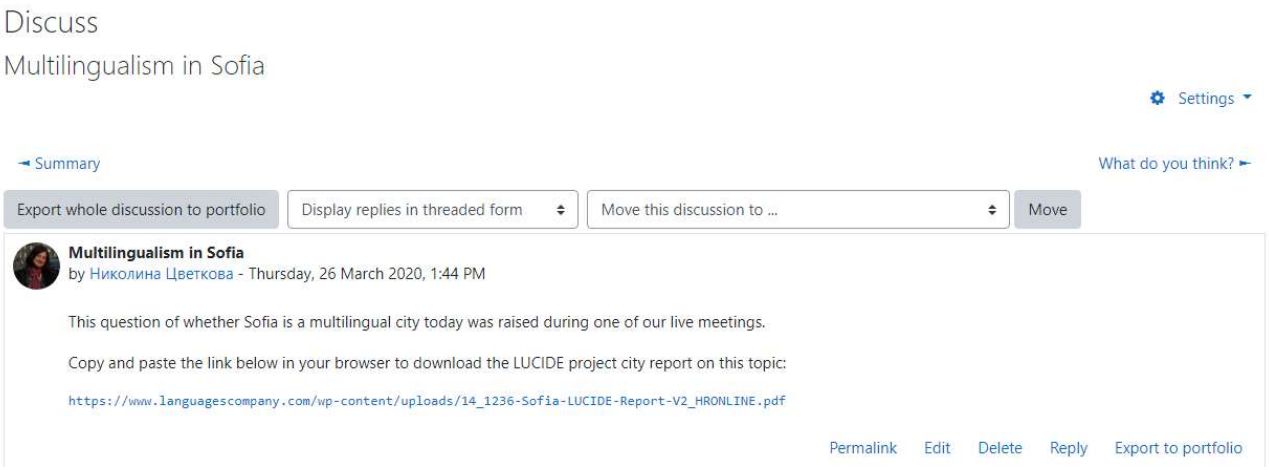

Fig. 9: A discussion thread initiated by the teacher to expand on a topic discussed in class

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Also, of importance was the suggestion to students of further reading - both online and in paper form.

Fig. 10: The Further Reading list for Unit 1.

6.1.7. Support materials or assignments for the pre-class activities

As indicated above a range of different materials and activities were used which were suitable for pre-class (and post-class) activities. In fact, all of the materials and activities were designed as such, but the most appropriate in a mixed environment are the following.

Materials

- Video extracts (both specially prepared and existing authentic texts, i.e. video lectures, YouTube videos, educational TV programmes, etc.)
- Audio extracts. (both specially prepared and existing authentic texts, i.e. audio lectures, interviews, etc.)
- Written texts - online or paper
- Websites
- Powerpoint presentations (or other types, i.e. Prezzi)

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Fig. 11: An example of incorporating an audio text – Unit 2

Activities

- Noting existing knowledge
- Identifying key points in a text
- Activities to ascertain detailed understanding - True/False; Multiple choice, Drag and Drop, etc.
- Finding keywords
- Predictive activities

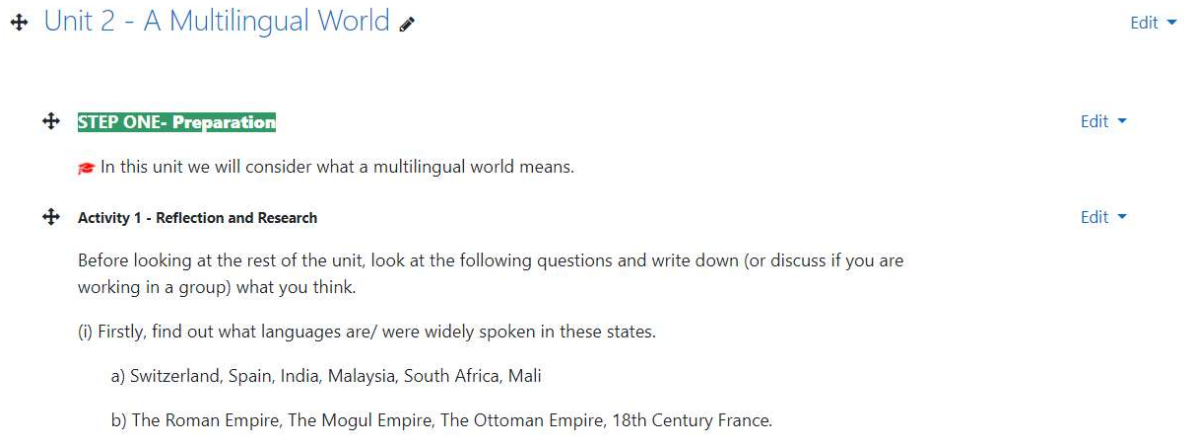

Fig. 12: An example of predictive activities – Unit 2

6.1.8. Classroom activities

Although the following activities could be done outside the classroom, they actually lend themselves more to interactive and participatory contexts.

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- Comparing ideas
- Summarising key points
- Open question and answer
- Reviewing prepared work
- Discussions - among students (See Fig... above)
- Seminars (See Fig. 5 above)
- Open essays
- Presenting ideas

6.1.9. Teaching approaches for the flipped classroom.

Methods

If the standard fare in the conventional classroom is one of Lecture (presentation), Seminar/discussion (practice, assimilation) and Q/A, Essay (consolidation and checking progress), as we can see from the above the flipped classroom will need a wider range of approaches, in particular in order to encourage the initiative and more personalised learning path of the student.

Some of these 'new' approaches are actually adaptations of what we already do. So instead of LECTURE (Teacher led), we can substitute a range of INPUTS (video, audio, website and indeed written texts) and guide the learner in accessing the main issues. Such inputs could be teacher led (a video lecture by the course tutor) but we also have the possibility of introducing a much wider range of already existing rich material, and indeed encouraging the students to search for relevant material themselves. In the Multiligualism course we had many examples of such 'input' material. The students can be asked to access and use such material in advance of the 'lesson', so freeing up class time for discussion and individual attention. Similarly, the customary end-of-unit "essay" can become a quiz or summary or indeed some creative writing which the student can produce online and in his/her own time. Importantly all such material can be available online for an indefinite period, so removing some of the pressure of the conventional lesson - "Miss it and it has gone!"

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Given the flexible nature of the flipped approach, which seeks to blend the use of different media and activities in the most appropriate manner, there are also approaches which are perhaps more 'innovative', often relating to the lived experience of students in the 'real' world. A number of such approaches were used in the Multilinualism course. These include:

- Student recordings (individual or group) for later discussion and or assessment
- Chat rooms for the exchange of ideas (Should the teacher always be present?)
- Video conferencing - Zoom etc. for discussion (students can speak, listen and also post messages)
- Use of the internet to access views of experts. Depending on the subject these may already exist or special arrangements for a distance seminar can be made.
- A range of evaluation tools - online quizzes and games, for checking small steps and also whole units. Custom tools exist to create such material.

Evaluation

The flipped classroom approach can lead to a different approach to student evaluation. As we have already mentioned, regular evaluation and assessment of progress can be done through small quizzes, multiple choice tests, etc. but beyond this we also experimented with end-of-unit assessment and new ways of offering credits online.

The evaluation techniques applied in the course on EU Language Policies (Introduction to Multilingualism in Europe) have been designed from the outset to allow for a more holistic type of evaluation which takes into consideration not only acquiring a certain body of knowledge but also target behaviours, skills and attitudes. Rather than have the students sit a final exam in the discipline we suggest assessment which is based on students' participation in the class discussions (both synchronous and asynchronous, online and face to face) – 20% of the final mark, ongoing assessment through the different types of quizzes and tests built in the course – 20%, preparation of and presentation of assignments – essays and small-scale independent research on topics from the course syllabus – 40%, and end-of-course test and oral exam – 20%. It is also possible to introduce a requirement for students to develop a portfolio with samples of their written work and the corrections suggested by the teacher. In

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this case the ratio between the different elements will be different, for example, 30% for preparation of and presentation of assignments and 10% for the portfolio.

The Moodle LMS disposes of a number of in-built assessment tools such as True/False, Multiple-choice, Matching, Gapped-text, etc. This makes it possible to implement different level quizzes to check what the students have learned on the course, i.e. – quizzes after a set of activities, end-of-unit and end-of-course tests. These can be graded in difficulty (i.e. questions with one or more correct answers) and provide objectively measurable results scored automatically.

Depending on the settings of the LMS, students can add their work to a portfolio. Alternatively, a One Drive or a Google Drive space can be dedicated to this with access provided for students do add their work.

Below is a summary of the types of assessment techniques which can be used on a course based on the flipped-classroom approach:

- Online discussions – asynchronous – using discussion fora and chats. It is important to encourage students to overcome a tendency to be 'lurkers' and contribute to the development of the discussion. Add instructions to comment on their colleagues' ideas; give extra points to those who read and respond to other people's posts. Introduce evaluation criteria at the outset, i.e. length of contribution, content coverage, turn-taking and development of the discussion, etc.
- Online discussions and debates – synchronous – using Big Blue Button, MS Teams video meetings, Zoom video conferences, Google Meet, etc. Introduce evaluation criteria at the outset, i.e. length of contribution, content coverage, turn-taking and development of the discussion, etc.
- Shorter and longer open essays on a given topic – as part of the end-of-unit and end-of-course consolidation and assessment (i.e. *Write an essay on the following topic: 'My home town as a multilingual place'. Use 500 words*). Introduce evaluation criteria at the outset, i.e. length of contribution, content coverage, theory/analysis – practice examples ratio, judicial use of sources, in-text citations and end-of-text lists of sources, etc.
- Assign theoretical texts for students to summarise and/or analyse – as part of the end-of-unit and end-of-course consolidation and assessment. Introduce appropriate

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evaluation criteria from the outset, i.e. content coverage, analysis, drawing conclusions, linking theory to practice, etc.

- Individual and group assignments – researching the language policy of a school or university, describing own language repertoire, finding out about other people's language repertoires; writing up recommendations to the school / university management about fostering multilingualism, etc. Introduce appropriate evaluation criteria from the outset, i.e. use of theoretical sources, gathering empirical data, content coverage, etc.

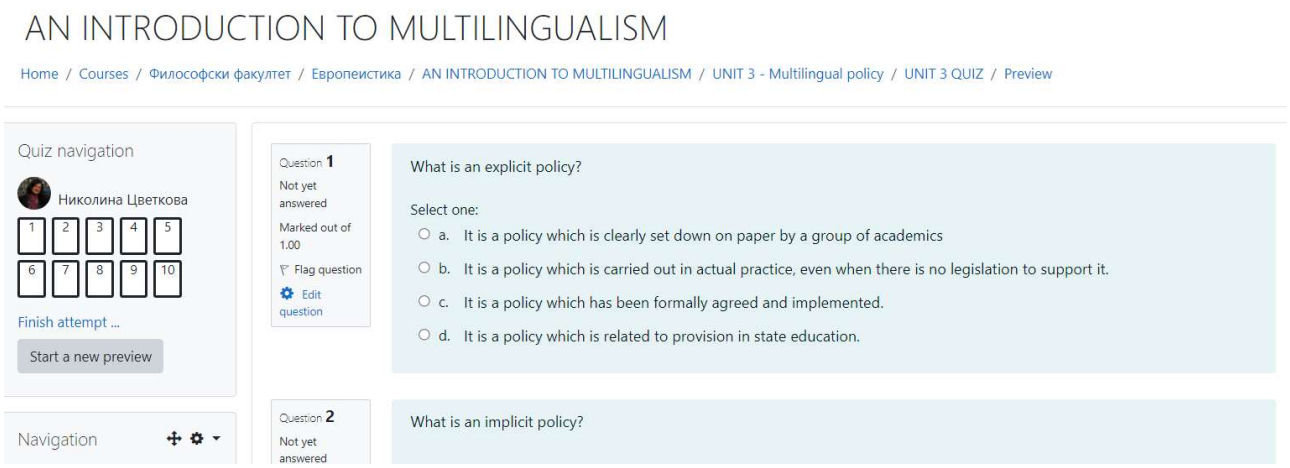

Fig. 13: An end-of-unit Quiz - Unit 3

It is also possible to add a self-evaluation and/or a peer-evaluation element based on the collaborative elements on the course and some of the essays can also be peer-evaluated against agreed criteria. This is expected to result in an enhanced awareness of both the course objectives and own progress and contributes to making students active participants in the learning process.

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6.2. Developing Integrated language Skills In a "Flipped Classroom" (Using Language through Literature Approach)

1. Postgraduate Teacher course (Module on teaching English through Literature Approach at secondary education)

2. Student teachers' pre-service course (Module on teaching English through Literature Approach for secondary education)
Online environment: Google Drive

2. First delivery 2019/2020, Fall Semester, 19 postgraduate teachers; second delivery 2020/2021, Fall semester 28 student teachers

6.2.1. Rationale

During the last few decades one of the top priorities in the educational policies on European and local level has been digitalization. In response to the main activities in the field of education, i.e. developing 21st century skills, promoting foreign language teaching and learning, team work, creating and sharing pedagogical practices with ICT/digital tools, our university has given tutors a green light to exploiting the potential of new technologies and experimenting with new teaching strategies. Realizing that the implementation of such strategies can only benefit students and foster their abilities to participate actively in real communication, and researching into current approaches with digital technologies, I have adopted one of the most popular blended learning approaches – the ' flipped classroom'.

What grabbed my attention? In the first place, there are a number of benefits for the students. For example, the opportunity to use various devices (or rather any device) to reach content, as well as to be your own manager in terms of the time, place or number of attempts to access the material. In addition to independent learning, students can learn collaboratively to solve difficult problems; they can get immediate feedback on their work as well. Not only that, involved in performing tasks outside classes like watching a video, listening to a podcast or reading an article, for example, and taking notes, answering questions, completing quizzes or questionnaires, and discussions/ debates, research, group and project work in class, students are required to use integrated language skills. Consequently, the constant transition from one llanguage skill to another makes students more confident users of the target language.

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Secondly, although there are drawbacks, tutors can benefit a lot, too. One of the biggest pluses is providing more in-class time for clarification, discussions/ debates and team work, during which tutors assume the role of facilitators of learning experiences, communication and collaboration among students. Another benefit is storing materials in one place. Once stored, they can not only be used over and over again, but customized according to the learning styles and needs of the students.

6.2.2. Description of the Module

The module on English through Literature Approach for secondary education is an integral part of a Student Teacher pre-service course and a Postgraduate Teacher-training course of Sofia University. Consisting of following the Out-of-class and In-class learning components, it can be utilized in an online teaching and learning environment as well. The module corresponds to 12 hours of In-class study and 18 hours of independent work equaling 2 CPD[7] credits for postgraduate teachers and 3 ECTS for student teachers. During the course the participants are put into secondary students' shoes and get a hands-on experience of actually applying the English through Literature Approach.

The module was initially designed with the idea to implement the flipped classroom approach into teaching and learning EFL by means of English through Literature Approach as an alternative to face-to-face modality. Studying content (video, podcast, presentations, etc.) is done individually at home during the Before-class stage and consolidating knowledge takes place afterwards during the In-class stage. Each of the three units (Romanticism, Victorian Age, and Modernism) consists of two lessons, structured around authors from the British and American literary canon. These lessons are in turn divided into three "steps" which follow Lazar's material design and lesson planning model applicable to novels and short stories, which includes three stages: pre-reading, while-reading and post-reading activities (Lazar, 1993: 84 - 86).

At some of the stages of the *Lessons* there are variants in: a. the succession or number of the used instruments (digital tools and resources, etc. materials); b. types of integrated skills. The following patterns of integrated skills are used in order to complete tasks:

[7] Under the latest Acts of the Ministry of Education as of 2016, Bulgarian teachers are required to develop their professional qualities and earn a minimum number of credits per year. According to the Continuous Professional Development (CPD) frame the course is equal to 2 credits.

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Receptive skill + two productive skills: *Listening – Speaking -Writing*

Two receptive skills + one productive skill: *Listening – Reading – Speaking; Listening – Reading – Writing*

It is possible to use integrated tasks where **two skills are required, one receptive + one productive:** *Listening – Speaking; Reading - Writing*

The choice of integrated skills, predominantly productive Speaking and Writing skills, is grounded on the one hand, on the understanding that in foreign language teaching and learning the emphasis is on developing communicative skills; and on the other, on the aims set in the syllabi for teaching English at the secondary level, respectively, i.e. developing fluency, including formulating well-structured statements, comments, arguments, etc. in oral and written form.

The final goal, however, remains the same: developing further the acquired language skills, expanding vocabulary and creating, understanding and interpreting written information, i.e. demonstrating acquisition of complex literacy.

From the very start it was obvious that to teach by means of new technologies is an arduous task – it requires not only knowledge of the content subject or technology, but also knowledge in terms of pedagogy and methodology, the balance between which should be very carefully maintained in order to achieve the best results. That did not dissuade me from adopting the flipped classroom approach, basic elements of which I used with the students prior to the implementation process.

6.2.3. What is flipped?

I started small by applying the approach on a particular activity from the pre-reading or while-reading stages of one single lesson: first, setting a short-term realistic goal, choosing methods of assessment and the appropriate activities for reaching the goal; then introducing the students to the idea of flipping, deciding on a suitable for everyone platform and appropriate open educational resources (OER). The traditional 'face-to-face' modality and lecture type of instruction was substituted with short video tutorials, PowerPoint Presentations/ Prezi or digital video meant for individual work outside the classroom. During

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the In-Class stage the learners play a leading role in the activities, while the course teacher is a facilitator and moderator. In pairs or small groups, they participate in oral or written activities for consolidation of knowledge, which requires using different sets of integrated skills. **Figure 1** shows the platform used for sharing the materials and the units comprising the module on English through Literature Approach, while **Figure 2** shows the resources from the Romanticism section used during the implementation of the flipped classroom approach.

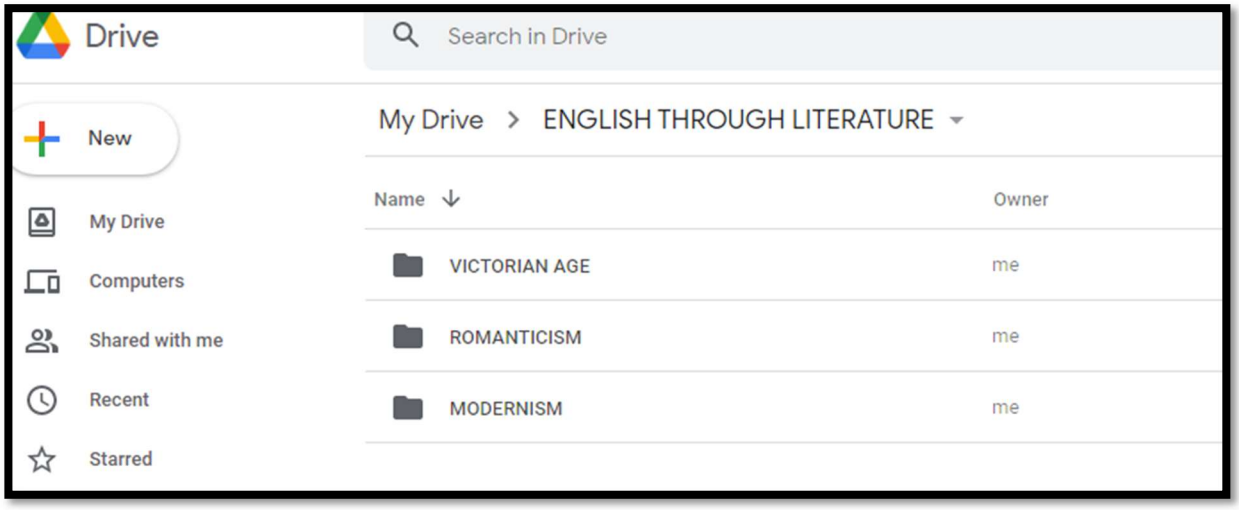

Figure 1: Google Drive – English through Literature

The second step was to apply flipping to a chain/ succession of lessons comprising part of a unit by using tailor-made audio or annotated presentations which give background information about the historical period, literary movements, authors' contributions, etc. (*see Figure 2*). Finally, after analyzing concepts and expressing personal viewpoints on discussed issues, the learners are assigned a creative task with which the post-class stage of the flipped classroom is completed.

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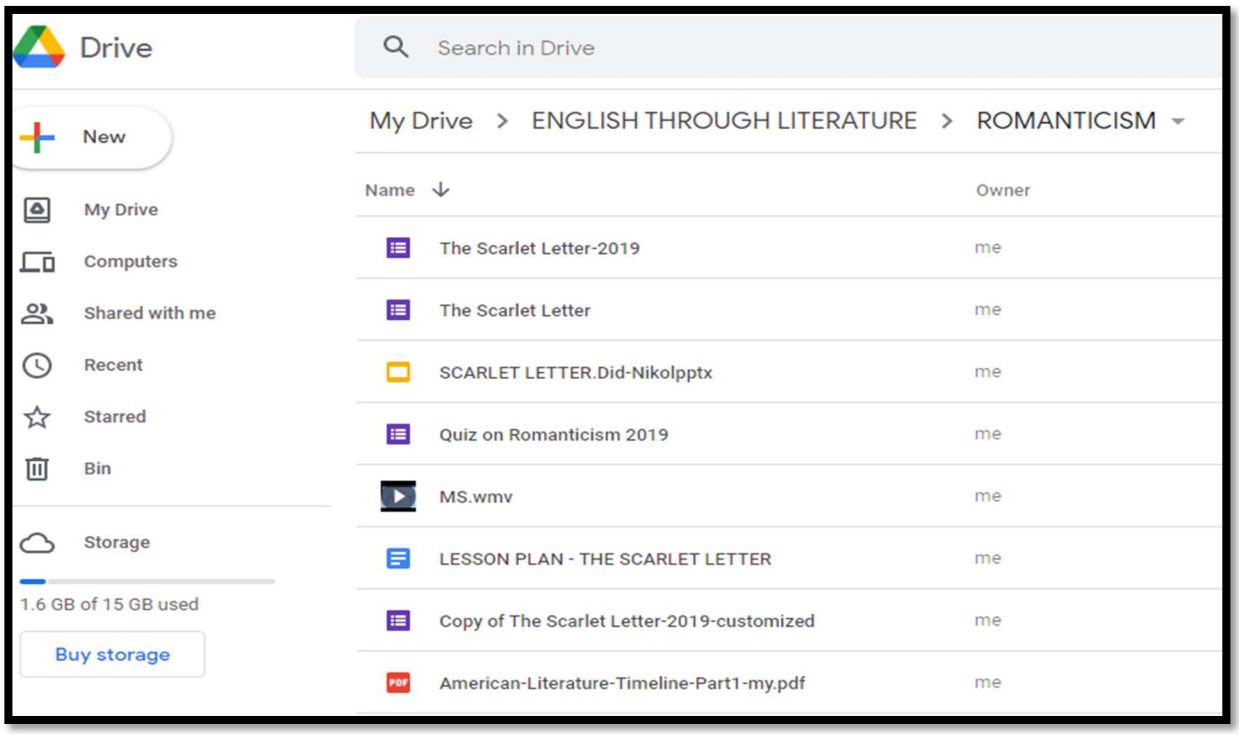

Figure 2: Google Drive, English through Literature, Romanticism, *The Scarlet Letter*

After the spread of the pandemic in the spring of 2020 and the subsequent transition to teaching and learning entirely online, I took the decision to continue using the flipped classroom approach in the fall semester of 2020-21 and make use of the same tools, platforms and resources. However, some of the activities were customized to suit the synchronous or asynchronous mode of instruction; Google docs with built-in hyperlinks and instructions to materials were used instead of plain Word documents; the face-to-face learning environment in the classroom gave way to Meet sessions, work in the main room or group work in breakout rooms; the standard questionnaire for assessment was substituted with a Google forms Quiz.

Here I will briefly consider sections from Lesson 1 and Lesson 6, structured respectively around *The Scarlet Letter* by N. Hawthorne and the *Great Gatsby* by S. Fitzgerald.

6.2.4. Preparation and presentation

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Similarly, to the other lessons, Lessons 1 and 6 go through the following three stages: preparatory (pre-reading phase), working (while-reading phase – interactive work with texts) and final (post-reading – tasks summarizing the work). A characteristic feature of every lesson is that it starts with a discussion on a topic related to the main one in the literary work. Its objective is three-fold: a. to help trainees with the cultural background; b. to stimulate their interest; c. to pre-teach thematic vocabulary.

As it can be seen from **Figure 3,** the students were asked to follow hyperlinks and completely different activities, i.e. listen to a soundtrack, read an article, watch a trailer and answer questions. On the one hand, these activities are planned to be completed at home individually during the Out-of-class stage preceding the in-Class, respectively Google Meet, stage. On the other hand, they are designed with the objective to prepare the students for further discussion on historical fiction and pre-teaching of thematic vocabulary. Further input in the form of online articles from reliable sources was provided for clarification of concepts. During the In-class stage, the written texts are used for expanding the topic or clarification done either by the tutor or another student.

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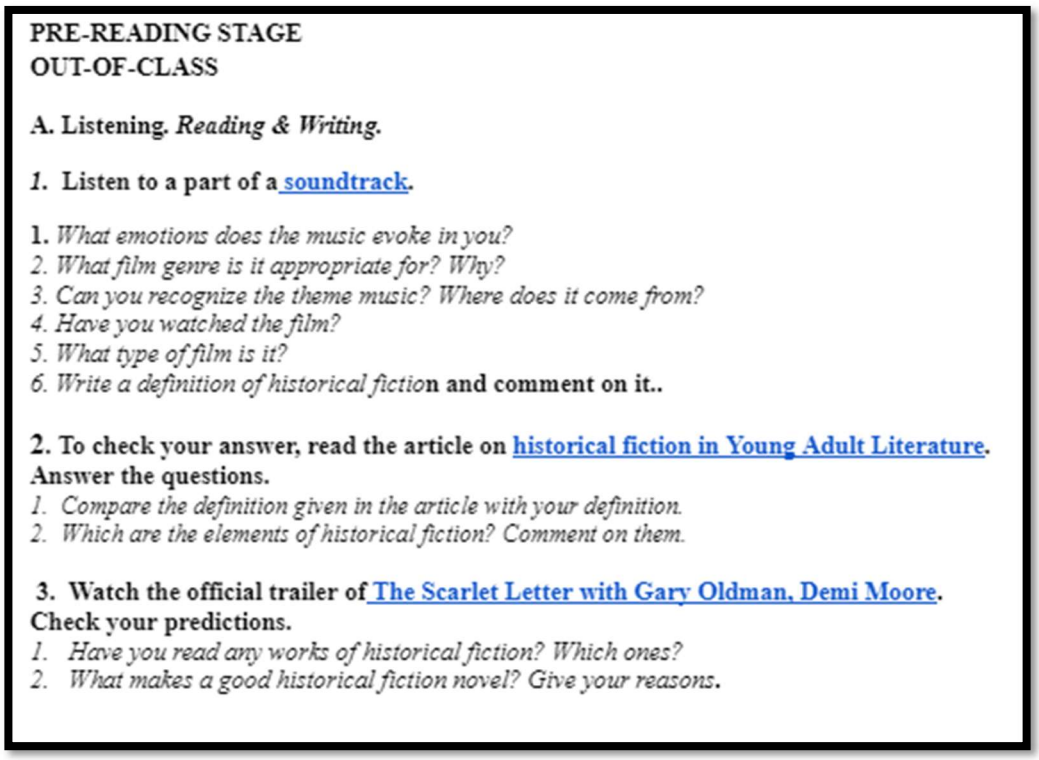

PRE-READING STAGE
OUT-OF-CLASS

A. Listening. *Reading & Writing.*

1. Listen to a part of a soundtrack.

1. *What emotions does the music evoke in you?*
2. What film genre is it appropriate for? Why?
3. Can you recognize the theme music? Where does it come from?
4. Have you watched the film?
5. What type of film is it?
6. Write a definition of historical fiction **and comment on it..**

2. To check your answer, read the article on historical fiction in Young Adult Literature. Answer the questions.
1. Compare the definition given in the article with your definition.
2. Which are the elements of historical fiction? Comment on them.

3. Watch the official trailer of The Scarlet Letter with Gary Oldman, Demi Moore. Check your predictions.
1. Have you read any works of historical fiction? Which ones?
2. What makes a good historical fiction novel? Give your reasons.

Figure 3: Unit 1, Lesson 1, Out-of-class stage

Another example of Out-of-class activities is illustrated with ***Figure 4*** where the students were asked to produce a summary after listening to a text and taking notes. Again, the activity is designed to be continued in the classroom where students compare notes and key points.

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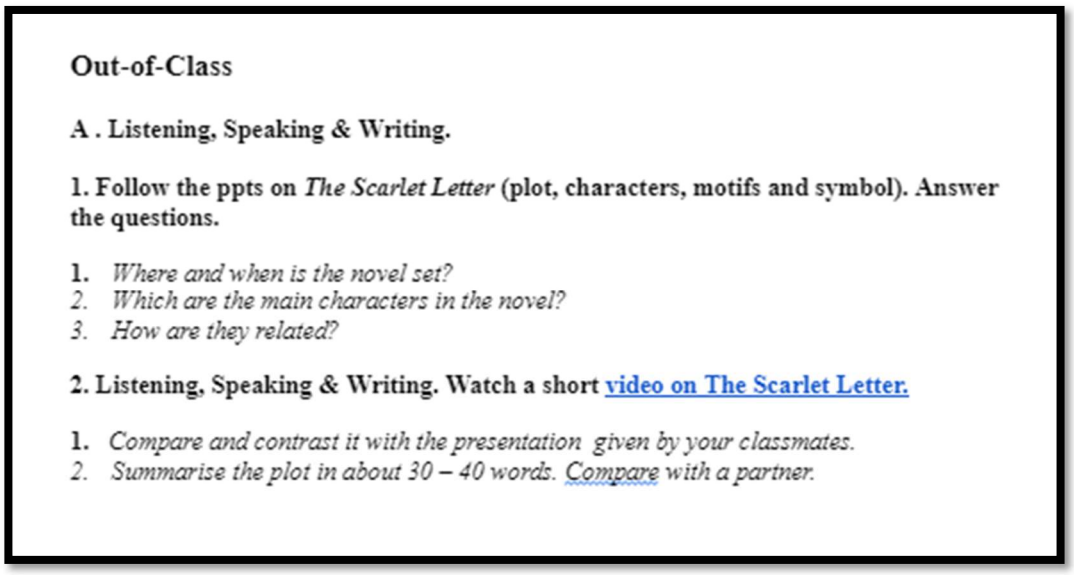

Out-of-Class

A . Listening, Speaking & Writing.

1. Follow the ppts on *The Scarlet Letter* (plot, characters, motifs and symbol). Answer the questions.

1. *Where and when is the novel set?*
2. *Which are the main characters in the novel?*
3. *How are they related?*

2. Listening, Speaking & Writing. Watch a short video on The Scarlet Letter.

1. *Compare and contrast it with the presentation given by your classmates.*
2. *Summarise the plot in about 30 – 40 words. Compare with a partner.*

Figure 4: Unit 1, Lesson 1, Out-of-class stage

6.2.5. Consolidation

The classroom, traditional or virtual, is the ideal place for consolidating knowledge (problem solving, working with thematic vocabulary, peer teaching, team work, etc.), analysing and evaluating input. Using thematic vocabulary in discussions and debates is vital for good argumentation and defending opinions. **Figures 5, 6 and 7** are illustrations of vocabulary building on the topic of crime and punishment.

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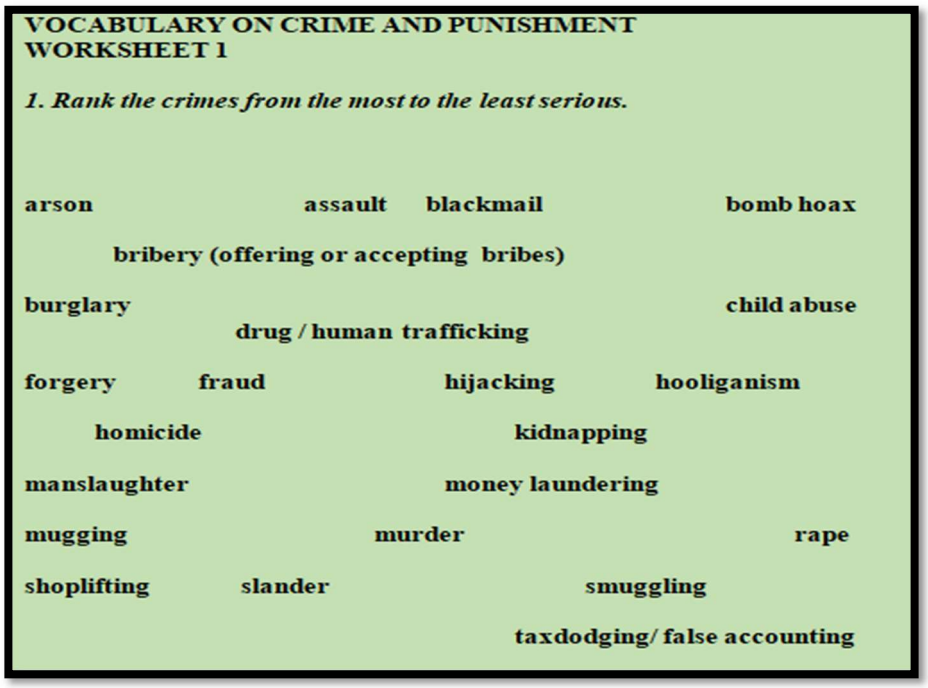


VOCABULARY ON CRIME AND PUNISHMENT
WORKSHEET 1

1. Rank the crimes from the most to the least serious.

arson assault blackmail bomb hoax

bribery (offering or accepting bribes)

burglary child abuse

drug / human trafficking

forgery fraud hijacking hooliganism

homicide kidnapping

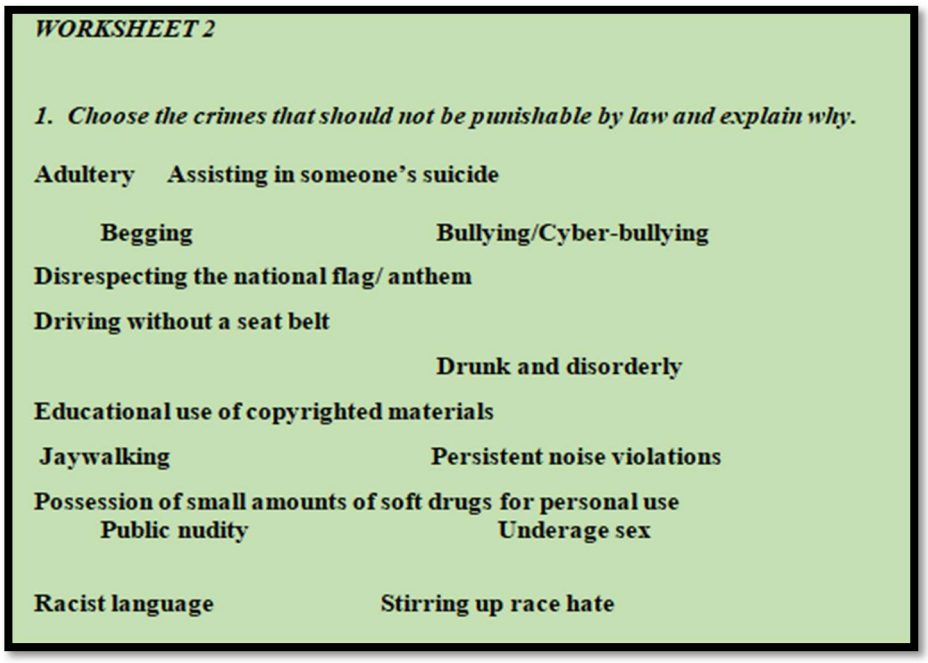
manslaughter money laundering

mugging murder rape

shoplifting slander smuggling

taxdodging/ false accounting

Figure 5: Unit 1, Lesson 1, In-class activities



WORKSHEET 2

1. Choose the crimes that should not be punishable by law and explain why.

Adultery Assisting in someone's suicide

Begging Bullying/Cyber-bullying

Disrespecting the national flag/ anthem

Driving without a seat belt

Drunk and disorderly

Educational use of copyrighted materials

Jaywalking Persistent noise violations

Possession of small amounts of soft drugs for personal use

Public nudity Underage sex

Racist language Stirring up race hate

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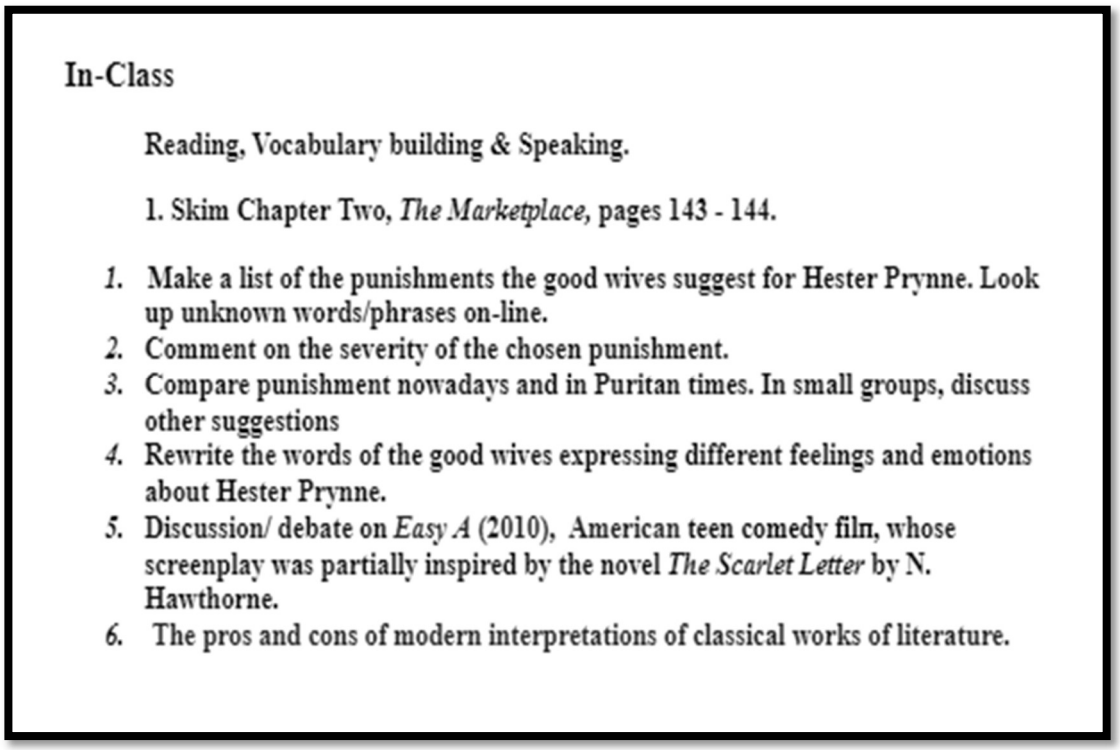
Figure 6: Unit 1, Lesson 1, In-class activities



In-Class

Reading, Vocabulary building & Speaking.

1. Skim Chapter Two, *The Marketplace*, pages 143 - 144.

1. Make a list of the punishments the good wives suggest for Hester Prynne. Look up unknown words/phrases on-line.
2. Comment on the severity of the chosen punishment.
3. Compare punishment nowadays and in Puritan times. In small groups, discuss other suggestions
4. Rewrite the words of the good wives expressing different feelings and emotions about Hester Prynne.
5. Discussion/ debate on *Easy A* (2010), American teen comedy film, whose screenplay was partially inspired by the novel *The Scarlet Letter* by N. Hawthorne.
6. The pros and cons of modern interpretations of classical works of literature.

Figure 7: Unit 1, Lesson 1, In-class activities

6.2.6. Support tools, resources and assignments for pre-class and post-class activities

The list of tools given here is not exhaustive - it can be updated with new ones depending on the teaching goals and learners' need. However, the following teaching and learning tools have proved their applicability for the module:

- Tools for editing: Adobe Spark/ PowerPoint & Office Mix /Prezi/Google Slides/ Jing/
- Tools for communication (video conferencing, collaboration and sharing): Googel Drive, Storybird, Google Classroom/ Meet/Hangouts
- Tools for student assessment and evaluation: Google Classroom/ Google Forms/ Storybird

Resources:

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- annotated presentations/ audio presentations/ Prezi (OER freely available for teachers and tutors to use, adapt and distribute (Slideshare, Ted, YouTube, Khan Academy) or prepared by the tutor)
- video tutorials, digital video
- extracts from film adaptations or trailers (YouTube or educational channels)
- podcasts
- blogs/forums
- online articles
- photos

An example of using different resources during the Pre-reading stage of the lesson comes from Unit 3, Lesson 6, Out-of-class activities. Here the students were asked first to get acquainted with a literary movement by reading an annotated online presentation, afterwards to listen to an audio presentation on the historical background of the period and finally to compare given definitions (*see Figure 8*).

Figure 8: Tailor-made annotated presentation by the tutor, Unit 3 Modernism, Lesson 6

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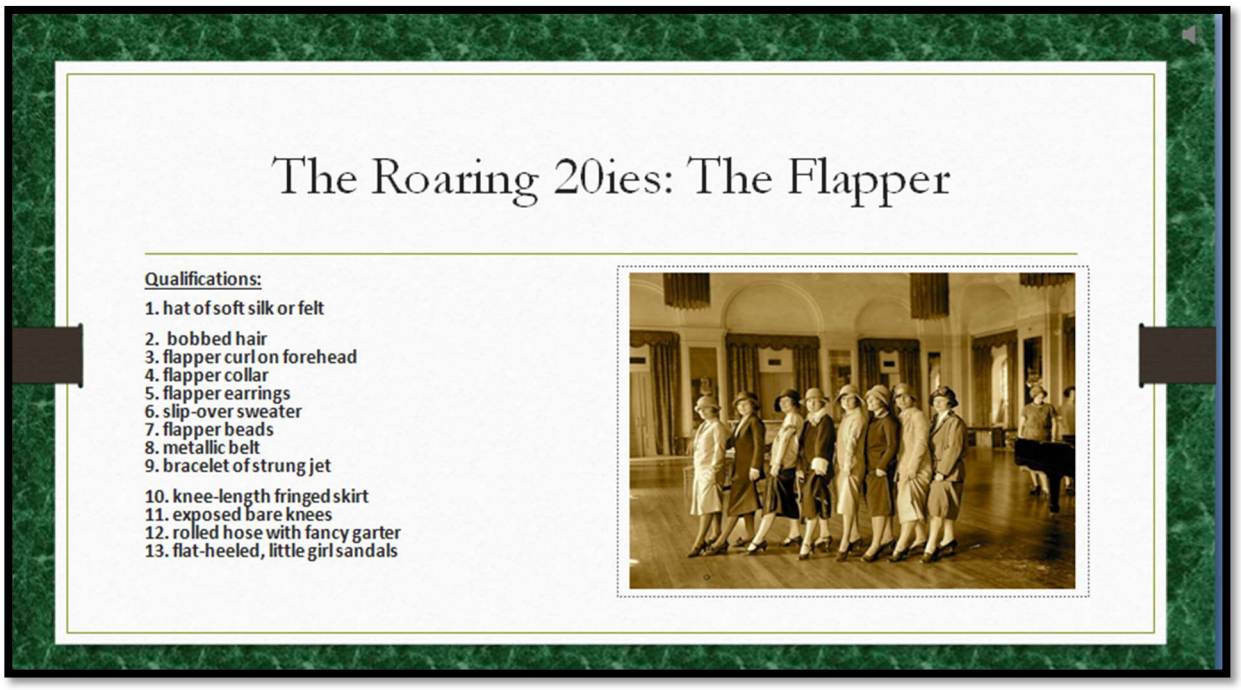

Figure 9: Tailor-made audio presentation, Unit 3 Modernism, Lesson 6

Out-of-class activities: listening or reading comprehension tasks, note taking, comparing and contrasting, making predictions, summarizing, etc.

6.2.7. In-class activities

- vocabulary building
- discussions (question based, sharing personal opinion or commenting more academic texts)
- for and against debates
- group work
- project work
- written assignments

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Figure 10: Tailor-made audio presentation, Unit 3 Modernism, Lesson 6, In-class discussion

6.2.8. Evaluation

Both groups of learners, the postgraduate teachers and student teachers, were periodically assessed for the completion of tasks from the module through quizzes made with the help of Google Forms. There are advantages for both tutors and students. Once the tutors prepare the quiz, they don't need to check the forms themselves. One advantage of this method of evaluation is the possibility to customize the tasks by adding an extra section for those who do not feel confident enough to complete the quiz without assistance (*see Figure 11*). Another advantage is the immediate feedback the students receive after completing the quiz. Furthermore, there is a possibility to complete the quiz for the second time if not satisfied with the first result. Tutors receive a summary of the responses of all the students or, if needed, of individual students, as well as responses per question (*see Figure 12 and 13*).

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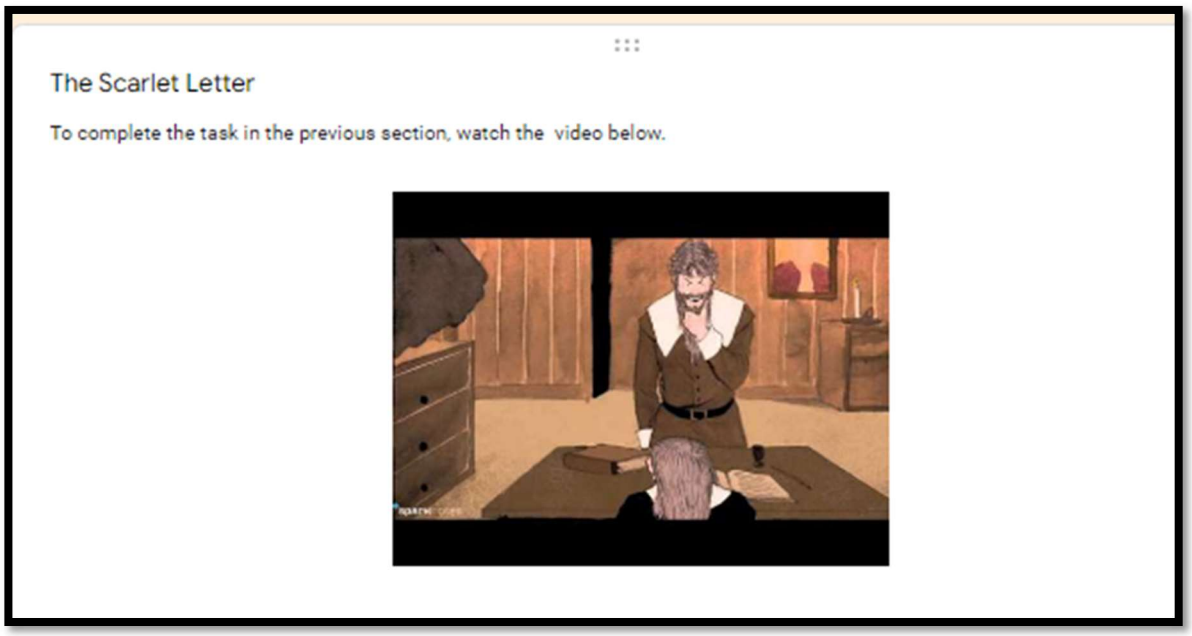

Figure 11: Post-class activity, Evaluation Quiz on Unit 1, Lesson 1

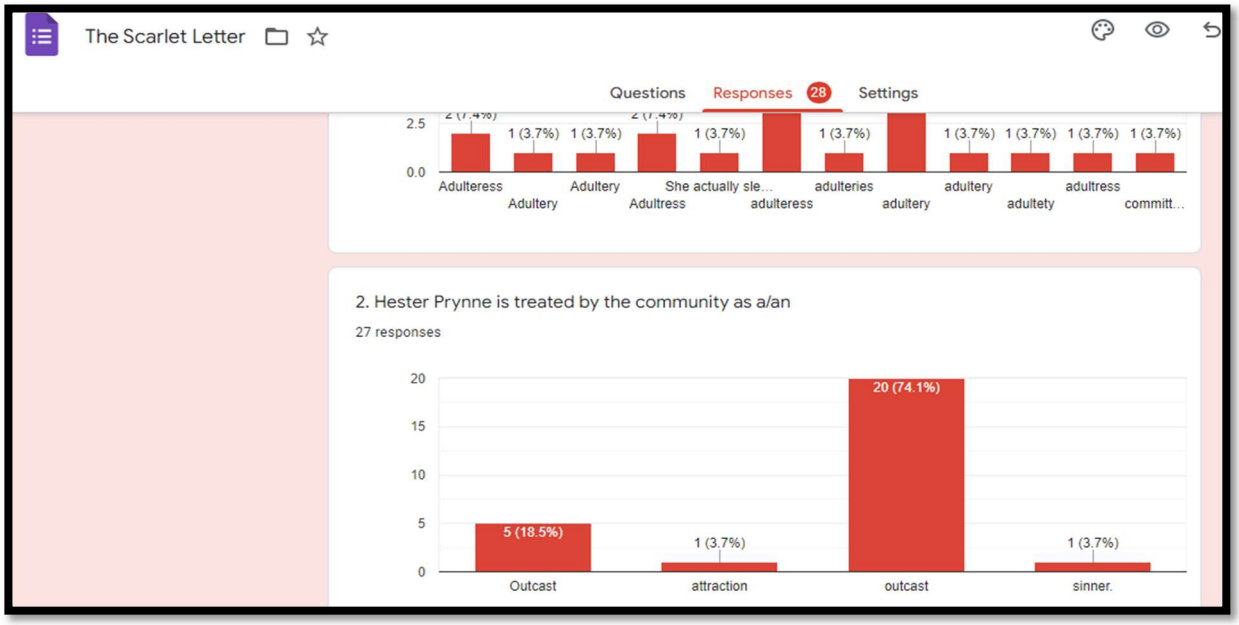

Figure 12: Post-class activity, Evaluation Quiz on Unit 1, Lesson 1, Questions, Responses

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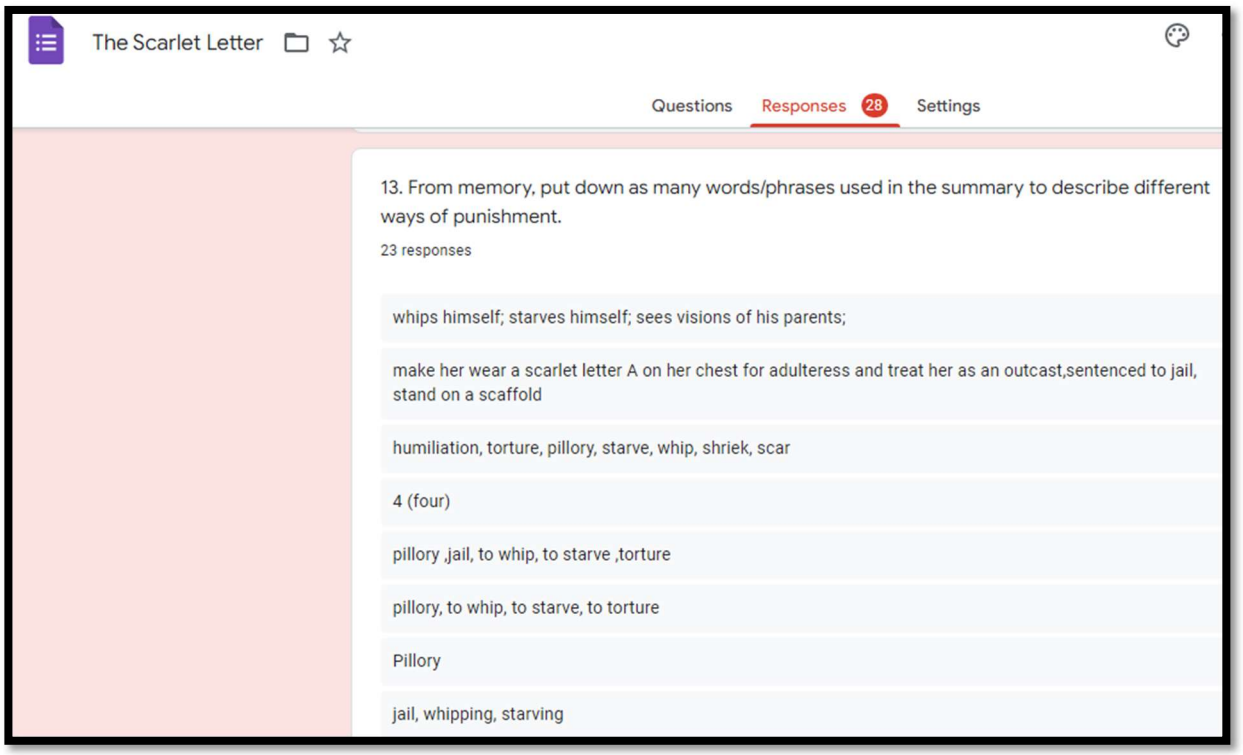

Figure 13: Post-class activity, Evaluation Quiz on Unit 1, Lesson 1, Responses

6.2.9. Post-class activities

The cycle of activities in a flipped classroom setting won't be complete without students' involvement in creative assignments. The ones used in the present module are project work and long essays on a given topic (*see Figures 14 and 15*).

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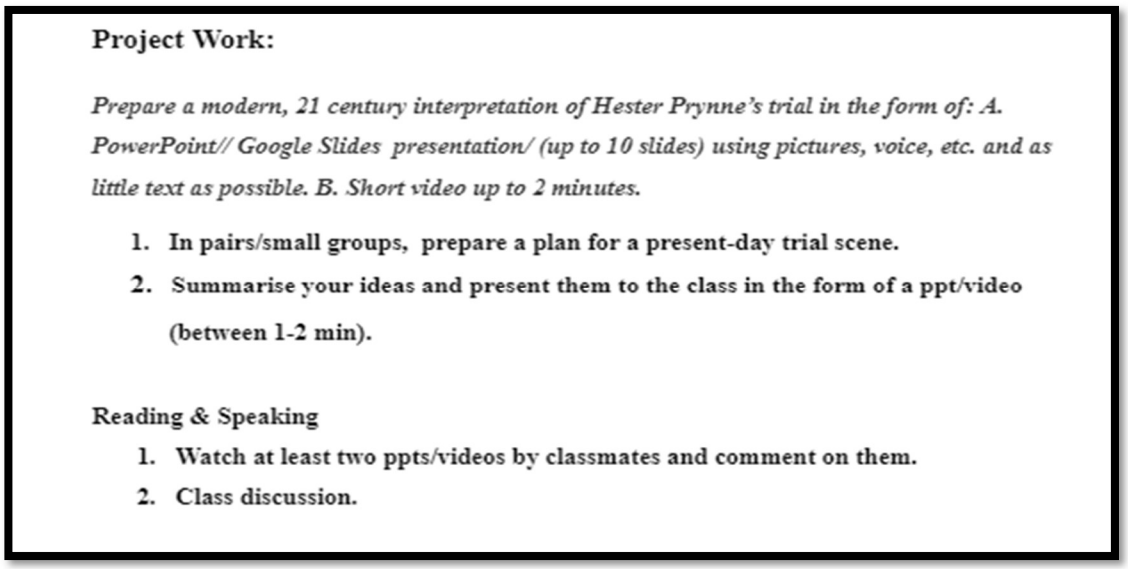

Project Work:

Prepare a modern, 21 century interpretation of Hester Prynne's trial in the form of: A. PowerPoint// Google Slides presentation/ (up to 10 slides) using pictures, voice, etc. and as little text as possible. B. Short video up to 2 minutes.

1. **In pairs/small groups, prepare a plan for a present-day trial scene.**
2. **Summarise your ideas and present them to the class in the form of a ppt/video (between 1-2 min).**

Reading & Speaking

1. **Watch at least two ppts/videos by classmates and comment on them.**
2. **Class discussion.**

Figure 14: Post-class activity: Unit 3 Modernism, Lesson 6, Project Work

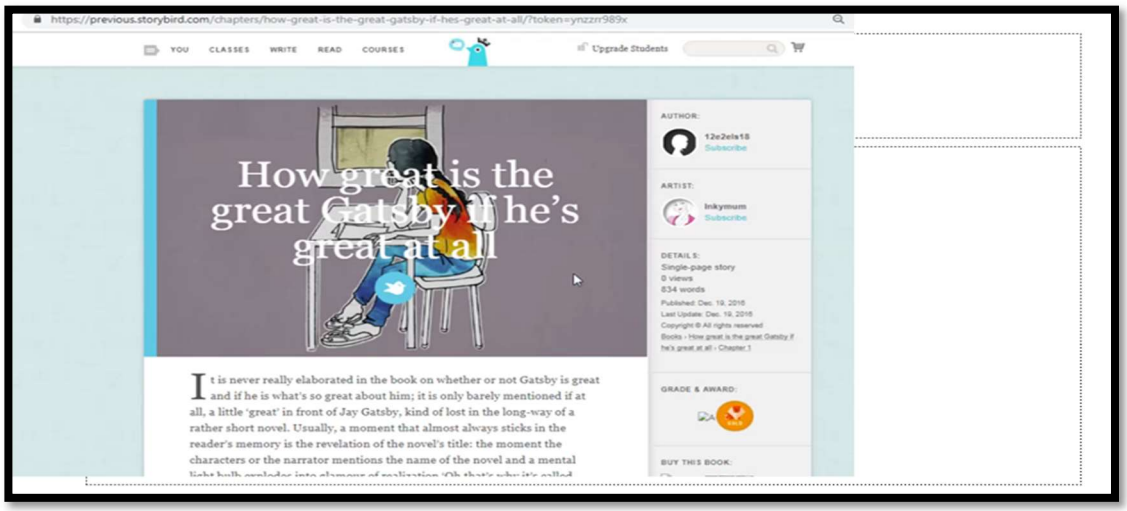

Figure 15: Post-class activity: Unit 3 Modernism, Lesson 6, Written assignment – Storybird platform

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6.3. Flipped learning for unravelling open education

Best practice title (name of the course included in the study programme, additional workshops/courses/conferences/lectures, other forms)**.**

Title of the course	Study level	No of students	The course topic where flipped classroom methodology was applied
Concepts of Adult Education	MA	16-20	Open education for lifelong learning

Year of the beginning of implementation.

2021

6.3.1. Substantial description.

This is a master study course for future or present education professionals, and it aims to enable students to acquire and develop a conceptual approach towards adult education and the ability to assess the various factors involved. The overall course consists of 13 topics, but there is 1 topic designed to be delivered in a flipped classroom way - *Open education for lifelong learning*.

This topic was selected thinking of the need to accomplish learning outcome that requires learners to be able to assess lifelong learning tendencies in EU and Lithuanian education policy documents.

This topic is delivered online on MsTeams. All the learning material, activities and course content is uploaded on Moodle where students can access learning material at any time.

6.3.2. Reasons to decide to use and apply a flipped methodology

It was decided to apply flipped classroom methodology because we seek to foster the development of students' critical and analytic thinking, increase their interest in the course, connect the new knowledge to prior knowledge, foster their understanding on how and why this knowledge is important to them, demonstrate active learning methods that they could apply and use in their own future practice.

Open education is a rather new concept and so it is important to help students to understand what open education is about, what role does it play in the context of life-long learning and adult education. Next to this, for present/future education professionals it is

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extremely important to be aware of the accessibility question and issues in nowadays global digital society. Therefore, it was decided to allow students to explore these topics through active learning methods and student-centred activities.

6.3.3. How much units and what exactly units have been prepared for:

Pre-class

Students are asked to:

- watch 2 videos on Youtube (10 minutes in total)
- watch a pre-recorded lecture from a teacher (15 minutes)
- listen to an extraction from a podcast (7 minutes)
- read a blog entry of a field expert (up to 10 minutes)

While studying learning material, students are asked to write down key words and ideas that emerge as the most relevant and important when talking about open education.

After studying learning material, students are asked to join the discussion forum on Moodle and answer 4 questions related to the content.

In-class (90 minutes)

Teacher initiates the Questions/answer session that is influenced by pre-class activities, aiming to assess how well students have prepared for the class. Questions are collected on Padlet wall. (5-10 minutes)

After teachers reflects on the questions raised, students are distributed into 4 breakout rooms (on MsTeams) where they are appointed to discuss on one of the questions that they had to answer after analysing learning material at home. Then each group presents their generalized ideas to the overall group. After presentation, students are asked to write down their group ideas on a shared googledocs document (15 minutes in-group discussion + 15 minutes presentation).

Following this activity, another 4 groups are formed, where students are asked to develop a concept map on what open education is based on the concepts, terms and ideas that they have written down during a pre-class activity and later discussions (15 minutes). Students can choose any application or tool they want to use for drawing this map (most often they use *mindmup*). Each group has to upload their concept map on a shared googledocs document and

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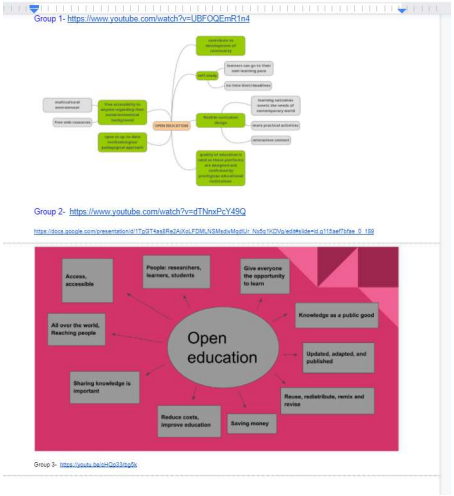
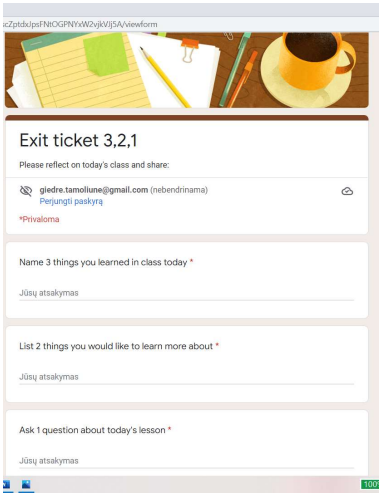
present it to all classmates by explaining why these concepts/terms/attributes of open education are important for adult learning (15 minutes).



A short discussion is organized on the pros and cons of open education (10 minutes)

Exit ticket 3-2-1 is introduced at the end of the class asking students to name 3 new things that they learned today, 2 things they would like to explore more, 1 question that remained unclear or unanswered (5-10 minutes).



Post-class

students are asked to write a short essay on how open education may foster lifelong learning. This fosters learners to reflect on their new knowledge, demonstrate critical thinking,

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their learning progress. At the same time, it helps teacher to see how students understand the material, identify the existing gaps and plan future activities.

Students are asked to fill-in the short self-assessment quiz on key aspects of the topic, helping them to monitor their own understanding and learning of the topic.

6.3.4. What are the support materials or assignments for the pre-class activities (video lectures, presentation, short texts, questions, etc.)?

Learning material encompasses different formats, which are video recording (on Youtube), recorded presentation by a teacher, blog entry OR scientific research, and podcast.

These different types of learning material were chosen on purpose, aiming to respond to different learning needs and types of learners.

6.3.5. What are the activities during the class (Q&A session, discussions on the students' home work and their responses to the questions, small tests, etc.)?

Questions and answer method, group-discussion, oral presentation, development of a concept map, discussion, 3-2-1 classroom assessment technique.

6.3.6. Innovative teaching methods used within the flipped classroom.

➢ What innovative methods are used

- Recording presentation with voice recorded in video format (1 record)
- Results of discussion summarised on Padlet
- All learning materials are uploaded on Moodle.
- All the materials available online.
- Breakout rooms on MsTeams for group work
- Development of a concept map on an open platform
- Using shared document to summarise results of group discussions and group work (GoogleDocs)
- Mentimeter
- Moodle discussion forum
- GoogleForms for developing Exit ticket 3-2-1

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➢ Changes in the evaluation of students' knowledge

- does the traditional exam has been replaced by some new forms as a consequence of using the flipped method? if yes, what kind of evaluation has been applied (combination of in-class and out-of-class online assignments; questionnaires; short extracurricular writing tasks, etc.?

Two additional open-ended questions were included to the final exam (test with closed and open questions), so that students could demonstrate their critical thinking and understanding of the analysed topics.

6.3.7. Online tools used within the flipped classroom.

- Mindmup (https://www.mindmup.com),
- Mentimeter (www.mentimeter.com)
- Padlet (www.padlet.com)
- Google forms
- GoogleDocs
- MsTeams
- Moodle

6.3.8. Background of implementing this best practice

(Before the pandemic as a novel way to teach; during the pandemic as a necessity; other circumstances)**.**

Teachers need to have sufficient level of knowledge on how to use mentimeter, padlet, googledocs, googleforms, breakout rooms (or any other equivalent tool) to organise active learning in a fluent way.

Teacher has to know very well the learning material that students were analysing before the class, so that when needed, teacher could give moderate the discussion easily, and emphasize the key points that are important for students to learn.

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6.3.9. Impact on the outcomes of a particular group of students/teachers (individual teacher's conclusions).

➢ What are the teacher's conclusions on using the flipped method in terms of its effects on students' learning? (having more time in class to deepen the student understanding; more personal interaction with different students – more or less advanced; improved communication with students, etc.)

Designing active learning in a class, allowed teacher to engage students more easily. At the same time, teacher designed metacognitive strategies that would help students to reflect on their learning, to apply their knowledge and make the learning that requires highest level of cognitive load to be less stressful.

Teacher had the possibility to observe how groups work and discuss, what is the input of each student into a group discussion and groupwork result.

Students are more open to share their ideas, turn on cameras, present, raise questions and discuss.

➢ How the students 'opinions were collected – through quantitative questionnaire, focus groups, etc.?

Students were asked to fill in a survey on the overall course, as well there was a short survey developed after the course, asking about the learning material, learners' awareness of their own learning, their input into preparation for the class and interest in different learning way.

6.3.10. Links to the website and any material related to this activity (visual, text, others).

https://www.mentimeter.com/
https://padlet.com/dashboard
https://www.mindmup.com
Why open education matters
Intro to open education
Distance ed lite (by M. Weller)

6.3.11. Contact details (name, surname, position, institution, E-mail).

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6.4. Threats for civilisation and sustainable development

Best practice title

Threats for civilisation and sustainable development

(name of the course included in the study programme, additional workshops/courses/conferences/lectures, other forms)**.**

In 2019/2020 and 2020/2021 it was a part of an obligatory course for students called "Threats for civilization and sustainable development" (Polish title of the module Zagrożenia cywilizacyjne I zrównoważony rozwój)

This module was dedicated to students in the second year of Bachelor's studies (Environmental Protection) at the Institute of Biology, Biotechnology and Environmental Protection at the University of Silesia.

In 2021/2022 it started to be a separate, obligatory module "Renewable energy sources" and now it has 15 hours lecture and 30 hours laboratories.

Year of the beginning of implementation.

First delivery 2020/2021, summer term (3 groups of ±10 students)

6.4.1. Substantial description.

This course developed a spirit of cooperation among students in planning tasks, solving environmental problems, detecting weak and strong aspects of using alternative energy sources, and opportunities and threats connected with the transformation in energy systems from fossil fuels to alternative energy sources.

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The flipped classroom course provides more time for active learning activities for some students. In this way, they can consolidate acquired knowledge, scientific terms, and their application in concrete tasks.

Another aspect was connected with restructuring the existing course (Renewable energy sources for Bachelor students of II years of Environmental Protection (summer semester) and to create possibilities to participate in it students from other directions or disciplines at the University of Silesia. The presence of students from a variety of disciplines will enable us to combine the law, economic, natural, and social aspects of using renewable energy sources. Moreover, to solve some conflicts connected with the transformation of the energy system to create a new attitude of society to energy-saving and not only consuming energy but also producing it.

The course enabled us to apply theoretical knowledge in practice. We plan to visit factories connected with producing energy from waste, such as wastewater treatment plants, biogas plants, some products energy crop plantations, or institutes that deal with biomass processing using such technologies as gazification and pyrolysis. Students will also have the possibility to participate in workshops on energy in transition.

Flipped classroom approach gives tutors many benefits. They gain more in-class time for clarification, discussions/ debates (brainstorms), and teamwork, during which tutors assume the role of facilitators of learning experiences, communication, and collaboration among students. Tutors can prepare classes in a more attractive way using many on-line applications and softwares that enable students to present their raports, summaries, formulate opinions, complete some databases and analyses of datasets, and climatic or abiotic factors are occurring in a given place.

Another benefit is that both learning materials and outcomes of student's team or own works can be stored in one place (MS Teams, Google Drive, OneDrive). In this way we can save time for printing or scanning materials. Students can also follow time schedules and organise they time for learning and measure learning progress. These learning materials (videos, e-books, scans, photos, pdfs) can be used over and over again, but customized according to the learning styles and needs of the students.

6.4.2. How much units and what exactly units have been prepared for:

- pre-class,

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- in class,
- post-class

and what activities students are supposed to do during these three phases.

a. What are the support materials or assignments for the pre-class activities (video lectures, presentation, short texts, questions, etc.)?

6.4.3. What are the activities during the class

(Q&A session, discussions on the students' homework and their responses to the questions, small tests, etc.)?

PRE-CLASS LEARNING

Part of the course title	Student learning resources	Activities/Tools	Assessment techniques
I	1. Introductory meeting 2. Short questionnaire – on-line survey alternative versus renewable energy sources 3. Pre-course activity	*MS Teams* – team: preparation for the next meeting a) watching videos on *YT* on energy autonomy, energy politics and renewable energy sources and their usage in developed vice developing countries	**Worksheet**: a set of questions relating connected to the videos that check students' knowledge about RES and understanding of problems connected with the transformation of present energy systems a) short open answers b) defining social, and economic aspects of using RES and mechanisms of financial support

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			c) comparison between fossil fuels and alternative energy sources
II	Overview of basic legislation acts on the use and localization of renewable energy sources (on-line)	Legal *database* of updated legal acts or articles shared on *MS Teams* in *Files*	**Self-assessment quiz** on legal acts connected to RES

IN CLASS LEARNING

Part of the course title	Classroom activities	Tools	Assessment techniques
I	1. Summary of the worksheets and the quiz results 2. In-group work on a case study 3. Clarification of the project concept a) identification of needs b) discussion of objectives and project plan c) establishing a time frame/organization of work	*Padlet*: a change monitoring tool, a tool for organisation; Office tools (criteria and milestones of the presentation)	**Top 10 Facts** (through **Explain**)
II	Students work in small groups (2-3) and prepare descriptions of chosen energetic crops used or potentially dedicated for energy purposes. They consider: origin of species (native versus alien species),	*Padlet / Excel sheet* (https://padlet.com/jagnakompala/33x48ltwgeoicthm) *Herbarium materials* (native and alien energy crops) *Examples of solid biomass* (pellets	**Memory matrix (Excel sheet)** **Ten top facts (features) of a "good energetic crop / map mind** **SWOT analysis**: strong and weak aspects of using biomass for energy production, opportunities and threats pros and cons of using biomass

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	climatic and edaphic conditions, annual biomass yield and caloric value, cost of maintaining and duration of plantation, natural enemies and diseases, parts of plants used for energy, threats to nature	briquettes, sawdust, sunflower seed husks waste from orcharding)	
III	*A field study*: practical aspects of the usage of energy sources	*A students' trip* to one of the plants or on-line presentation **waste water treatment plant** biogas plant wind farm energy crop plantation institutes that deal with the technology of biomass processing whether a wastewater treatment plant can be self-sufficient in energy production and use. Prosumer versus consumer – discussion	**Worksheet**: a report or short essay on energy production from sewage sludge, energy saving, using microbiological processes in biogas production,
IV	*Case studies* Possibilities for the usage of renewable energy sources in chosen municipalities – striving for energy autonomy	PowerPoint, Prezi presentations of projection on the student's group forum Padlet https://padlet.com/jagnakompala/Bookmarks	**Small projects** on using renewable energy sources, considering law economic conditions natural conditions

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POST-CLASS ACTIVITIES

I	Energy safety and energy politics in the era of transformation. What should we do to save energy and limit our daily consumption?	Canva, PowerPoint,	preparing a poster to promote energy autonomy; calculation of our carbon footprint https://smoglab.pl/policz-swoj-slad-weglowy-kalkulator-onz-ci-w-tym-pomoze/
II	Renewable energy sources at the era of transformation	Google forms (tests)	Short assessment of knowledge gained during the course - single-choice test, - short open answers - drag the text onto the picture/text

6.4.4. Innovative teaching methods used within the flipped classroom

What innovative methods are used?

- Recording presentation with voice recorded or mini-lectures in video format (how much presentations?).
- The video lectures are uploaded (assuring easy access for students) (in LMS?).
- All the materials available on-line.
- Division of students into small groups for on-line discussion.

The course began with an on-line lecture about energy politics in Europe and Poland. However, a presentation was put in a folder to help students be familiar with the problems discussed. We gave students all learning materials on-line, so they did not spend time looking for them and had access to them throughout the course even if they were absent during classes.

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The course started with a small questioner prepared *in google forms*: a short survey on knowledge of different energy sources, both fossil fuels and alternative energy sources.

On Teams, the teacher could divide students into smaller groups (2-3 people) to enable them to work and discuss the project of using renewable energy sources in some municipalities of the Wielkopolska voivodeship. They had to look through legal documents in order to assess the possibility of locating RES-based investments, check the climate conditions (based on maps of insolation, temperature, and precipitation), and make a simple map based on GIS tools) as well as look through environmental programs that can help finance such projects. Some students also prepared a business plan for such a planned investment.

This year we prepared a SWOT analysis at Teams to present the strengths and weaknesses and the opportunities and threats associated with biomass as a renewable energy source.

I used *Learning application* to familiarise students with the definitions of biomass under Polish and international law, as well as to practice different ways of classifying biomass.

- Interactive concept map for each chapter of the textbook.
- E-tests for starting and ending a class.
- Other methods such as: quizzes, questionnaires, short writing assignments to hold students accountable, more discussions, etc.

During classes, students were working in 2-3 smaller groups with plants that could potentially be used as renewable energy sources. They had to prepare short characteristics of them based on their origin, climatic and edaphic conditions in which such plants grow, natural enemies and diseases, parts of plants that can be used for energy purposes, types of energy produced from plants, potential biomass yield, duration of the plantation, costs of founding such plantation, threats to natural environment caused by introducing such plant to the environment. Next, the most important data about plants were collected in one excel file on Ms Teams. Further, with the whole group, after short presentations of chosen energy crops we created a concept of "ideal energy plant crop".

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6.4.5. Changes in the evaluation of students' knowledge

- Does the traditional exam have been replaced by some new forms as a consequence of using the flipped method?

- If yes, what kind of evaluation has been applied (combination of in-class and out-of-class on-line assignments; questionnaires; short extracurricular writing tasks, etc.?

Traditional exams were replaced with some new forms of evaluation. They comprise both in-class and out –of-class on-line assignments after some part of the learning material.

The knowledge and skills that the students used the students acquired during the separate classes in preparing the final credit presentation. It was presented to the whole group of students, and then the students asked questions and discussed the crucial thesis of the presentation.

6.4.6. On-line tools used within the flipped classroom.

- Office365 software (https://www.office.com) (sway, google forms)
- Padlet (https://www.padlet.com)
- Learning applications (https://learningapps.org)
- Canva (https://canva.com),
- QGIS (https://qgis.org/pl/site/forusers/download.html)
- etc. (See table on p. 75 of the Flipped Methodology)

6.4.7. Background of implementing this best practice

(before the pandemic as a novel way to teach; during the pandemic as a necessity; other circumstances)**.**

As a necessity during the pandemic, I started this course in an on-line version in 2020. It had 17 hours and comprised 4 classes and 1 lecture. The students were divided into three small groups (each group had ±10 students). On MS Teams folders for individual classes teaching materials, datasets, and worksheets with instructions were placed. The students were to study in their own time a video on the use of renewable energy sources in the world, energy

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policy, and energy autonomy, and complete the tasks on the worksheet. Students work individually on some tasks or in groups (2-3) in case of presentation.

6.4.8. Impact on the outcomes of a particular group of students/teachers (individual teacher's conclusions).

What are the teacher's conclusions on using the flipped method in terms of its effects on students' learning? (having more time in class to deepen the student understanding; more personal interaction with different students – more or less advanced; improved communication with students, etc.)

Flipped classroom teaching has many benefits for a teacher. It allows the teacher to spend more time deepening and consolidating the students' specialist knowledge using various activation methods; it provides the opportunity to develop individual interactions with students. The student can work at their own pace to achieve the learning outcomes. It also saves time for scanning materials, preparing herbarium material, and printing worksheets. In folders set up on MS Teams, we can collect pdf-s, e-books, and presentations. In this way, they are not only easy to access every time but can be completed by students and cannot be lost. After submitting the work, the student and the teacher are informed about this fact. Students had a return message that the work was delivered on time or with delay. It was an impulse to organise their time better for some of them. For the tutor, it is convenient since she can make direct comments on students' work and ask them for supplements or explanations.

6.4.9. How the students' opinions were collected – through quantitative questionnaire, focus groups, etc.?

I was discussing the on-line classes with students on-line. It was easier for them to find time to participate in courses; they did not have to move between university buildings that occur in three towns. The break-out rooms enable students to discuss parts of projects and teacher can follow their progress and if it is necessary to play a role of facilitator Moreover, they can practice new skills at their own pace.

6.4.10. Links to the website and any material related to this activity (visual, text, others).

- https://drive.google.com/drive/u/0/my-drive; OneDrive

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- MS Teams Assembly 2019_2020; 2020_2021; 2021_2022
- https://padlet.com/jagnakompala/Bookmarks
- https://padlet.com/jagnakompala/33x48ltwgeoicthm
- https://sway.office.com/cWO9llc5IrKrBFMv?ref=Link

6.4. 11. Contact details

(KOMPAŁA-BABA DR HAB. INSTITUTE OF BIOLOGY, BIOTECHNOLOGY AND ENVIRONMENTAL PROTECTION,agnieszka.kompala-baba@us.edu.pl; HTTPS://DRIVE.GOOGLE.COM/DRIVE/U/0/MY-DRIVE).

6.5. Social Policy

Best practice title: Social Policy
Subject: Social policy,
Field of study: Political science,
Year of study: 1.

Year of the beginning of implementation: 2020/2021

6.5.1. Substantial description.

Reasons to decide to use and apply a flipped methodology

- Developing independent students' thinking.
- Developing students' critical thinking.
- Increasing their capacity for solving problems.
- Improving communication with students.
- Increasing interest to the given course.
- Applying knowledge in practice.
- Providing more time for active learning activities.
- Developing spirit of cooperation among students.

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How much units and what exactly units have been prepared for:

15 different units connected with Social policy.

- pre-class: watching a lecture recorded for tchem, reading a presentation in Prezi, reading the GUS and the Eurostat reports, reading academic books and chapters, reading scietific articles.
- in class: working in small groups: (Top 10 facts, Let's play, Pyramid of challenges, Solutions, Challenges, Mind map, Edward de Bono's 6 Mind Hats, Brainstorm) and doing individual exercises: Elevator pitch, what do I remember?
- post-class: recordings, Q&A session, essay, ten facts, keywords.

What are the support materials or assignments for the pre-class?

- video lectures,
- presentation,
- short texts.

What are the activities during the class?

- work in small groups,
- Q&A session, discussions on the students' homework and their responses to the questions,
- academic debates,
- individual exercises,
- small quizzes.

6.5.2. Innovative teaching methods used within the flipped classroom.

What innovative methods are used?

- Presentation which are available online.
- Recording two mini-lectures in video format.
- The video lectures are uploaded (assuring easy access for students).
- Division of students into small groups for online work.
- Academic debates and discussions.

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- Quizzes.
- Short writing assignments.

6.5.3 Changes in the evaluation of students' knowledge

Yes

What kind of evaluation has been applied: combination of in-class and out-of-class online assignments; online quizzes, writing tasks. The final mark was based on the marks of individual tasks.

6.5.4. Online tools used within the flipped classroom

- Prezi software (www.prezi.com),
- Screenr (www.screenr.com),
- Coggle.it (https://coggle.it),
- Mindmup (https://www.mindmup.com),
- Kahoot (https://kahoot.com),
- Quizizz (https://quizizz.com/),
- Explain Everything (https://explaineverything.com/),
- Mentimeter (https://www.mentimeter.com/).

Background of implementing this best practice: during the pandemic as a necessity.

6.5.5. Impact on the outcomes of a particular group of students/teachers

(individual teacher's conclusions)**.**

What are the teacher's conclusions on using the flipped method in terms of its effects on students' learning?

- having more time in class to deepen the student understanding;
- more personal interaction with different students – more or less advanced;
- improved communication with students;
- made classes more interesting;
- increased students' involvement.

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- establishing a deeper relationship with students,
- adjusting the pace of classes to the needs of all students

6.5.6. 11 tips for using a flipped classroom in academic class:

1. Before class, give students the material to be prepared. It can be, for example, watching a lecture recorded by you, analyzing statistical data on a selected problem, reading a scientific article, etc. This material must provoke reflection and further exploration of the topic.
2. Ask the students to read the material thoroughly and (or) to make their notes and draw conclusions.
3. During the classes, make sure that all participants are active. You can achieve this by organizing, for example, group work. Ask students to turn on the cameras to facilitate communication.
4. Remember that small groups should not be too large. Ideally, they should consist of a maximum of 4-5 people. As a result, it is more likely that all students will join in and be active.
5. When dividing students into small groups, make sure they are different each time. As a result, students will be able to exchange views with more people. You will also achieve the effect of freshness. If you conduct online classes in Zoom or MS Teams, you can use the random division of participants into groups.
6. The advantage of working in groups is that they achieve a synergy effect, according to which the group will accomplish much more than all the individuals separately.
7. Monitor the work in small groups. Visit places where students work (canals, rooms, etc.). If they have any questions or concerns, you will be able to answer them there. In addition, you will partially listen to the discussions and make sure that the students have understood your instruction well.
8. Do not leave your computer or mobile device. It would help if you told students that you are present during their work and they can write to you at any time or ask you to join their conversation to explain the exercise rules to them.
9. Accurately set the time to perform a given exercise. Ask students to adhere to the specified time limit.

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10. It is good to say commands (exercise description) during online classes and write them down in a group chat. Thanks to this, you will increase the likelihood that all participants in your classes know well what to do.

11. Working in groups does not make sense if you do not make sure that each small group can present the effect of their work. It is worth providing additional time (a few minutes) for discussion and exchange of views between students. The conversation can be a result of the presentation of individual groups.

6.5.7. How the students 'opinions were collected?

– through quantitative questionnaire, focus groups, etc.?

The evaluation of the classes will take place in the Mentimeter application. The teacher will send the students a link to the evaluation survey in a team conversation in MS Teams: https://www.menti.com/amfiytusam.

6.5.8. Links to the website and any material related to this activity

- https://prezi.com/p/ko1zv0vwwm_s/?present=1
- https://prezi.com/p/f9ubng49ba_2/?present=1
- https://www.menti.com/amfiytusam
- https://create.kahoot.it/share/society-in-numbers/f9589b9b-1743-46bb-8b2d-d051b24d41a3
- https://mindmapsunleashed.com/how-to-mind-map-with-tony-buzan
- https://www.mindtools.com/pages/article/elevator-pitch.htm

6.5.9. Contact details

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6.6. Technology enhanced learning organization

Best practice title - Technology enhanced learning organization

This is a course of the bachelor learning programme "Education and Information Technologies", which is delivered fully online in Lithuanian language**.**

Year of the beginning of implementation.
2014

6.6.1. Substantial description.

Reasons why it was decided to use and apply a flipped methodology:

- Developing independent students' thinking.
- Developing students' critical thinking.
- Increasing their capacity for solving problems.
- Increasing interest to the given course.
- Applying knowledge in practice.

How much units and what exactly units have been prepared for:

All course with 10 topics was adapted for flipped class methodology. It is started with 2 introductory topics: one – presenting each other, and the other – presenting flipped class methodology. The request to present themselves in padlet is sent for students before first online meeting with the reminder when (date, time) and where (link) the meeting takes place. During the online meeting an introductory activity with general questions asking to turn the camera on if they agree is organized as an ice braker. Then the flipped class methodology and student guide with all assignments are presented.

What are the support materials or assignments for the pre-class activities? What are the activities during the class?

There are 10 pre-recorded theoretical parts with multiple choice questions for each topic that students have to watch as pre-class activities. Depending on the topic, there also are

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some other student pre/post class activities where they need either to make selections for their presentation topics, or moderate discussion topics or similar. During the lectures/online meetings, the activities tend to deepen the knowledge and activate students, thus they are mainly discussions, presentations or implementation of other practical tasks.

6.6.2. Innovative teaching methods used within the flipped classroom.

What innovative methods are used?

- Recording presentation with voice recorded or mini-lectures in video format (10 presentations varying from 15 to 20 min) with embedded e-tests.
- The video lectures are uploaded in Moodle and are accessible for students during the course, providing possibility to catch up even for those who were not present.
- All main and optional learning materials (slides used for presentations, questions for discussions, readings, links to other interesting and topic related videos or websites) are available for students in Moodle.
- Division of students into small groups for online discussion.

6.6.3. Changes in the evaluation of students' knowledge

Before introduction of Flipped class methodology in the course there are 4 practical tasks, midterm test and exam. With the introduction of pre-recorded video presentations with the MC question included, the midterm test was removed from the assessment strategy

The new assessment strategy is the following:

Assessment of learning (course assignments leading to final grade)	Grade	Weight	Total
1 task – the plan	10	10%	70 %
2 task – the presentation	10	20%	

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3 task – forum moderation	10	20%	
4 task – active participation ("in class" activities)	10	20%	
Exam (online test)	10	30 %	30 %
Total			**100 %**

6.6.4. Online tools used within the flipped classroom.

- Moodle (including H5P) as virtual learning platform
- Adobe connect or MsTeams (depending on student preferences)
- Padlet
- Google Jamboard

Background of implementing this best practice

This course was delivered online before pandemics for bachelor study program student, who are studying online. With the need for more structure and student engagement, after participation in the project, introducing the flipped class methodology, it was decided that this course is itself very useful to be delivered following this methodology.

6.6.5. Impact on the outcomes of a particular group of students (individual teacher reflection).

The different structure of assessment provided possibility to deeper student knowledge on the topics, necessary for future TEL managers. Different organization of activities (that before flipped classroom introduction were difficult to understand and perform for students as homework) lead to not only the deeper knowledge but also time saving: starting them during online meetings made them easier to understand, provided a possibility to check if there are some questions (which usually appear when you start doing activity) and to discuss its implementation with peers, receiving instant feedback from them and the teacher. Recordings of video meetings created the possibility for those who were not able to participate to rewatch the recording afterwards, however not motivated (some of them) to participate at the indicated time.

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Students' opinions were collected in a form of quantitative questionnaire, run at the end of the course delivery and discussions during the synchronous meetings.

6.6.9. Contact details

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7. CONCLUSIONS AND RECOMMENDATIONS

Based on the presented cases on flipped classroom method, Melody, Bowdon, Mansfield, and Waldrop (2016) make some conclusions and recommendations on it.

- **Teachers' motivation for flipping**

When asked about their primary motivation for flipping their courses, the authors offered a variety of responses, including desires to increase student engagement, to foster student-student and student-teacher collaboration, to promote students' higher-order thinking skills, to build stronger (but less dependent) student-teacher relationships, and to make the most of limited face-to-face class time. These motivations demonstrate that faculty members' wish to promote deeper, more interactive learning, but they also suggest that faculty want to make learning more personal.

While all of the authors shared their belief that the flipped teaching method has positive implications for student learning outcomes, some expressed concern that the flipped teaching method was not the best fit for all students.

- **Preferred technics**

Different teachers prefer different technics for students' activation such as:

- students develop creative solutions to large and complex business and community problems;
- "clicker competitions";
- in-class writing sessions;
- opportunity to provide one-on-one guidance for her students;
- using Guided Practice to prepare students for class;
- students work on problems in small groups;
- using an engaging case study, etc.

- **Motivating Students to Prepare for Class**

Teachers are using also different strategies to motivate students' preparation for classes, such as:

- quizzing students on the preparatory content;
- assigning a small comprehension task;
- posing questions that previewed the focus of the next session, and others

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- **Benefits and Challenges**

Among the benefits of flipping the teachers mention an increased student engagement, deeper learning of course concepts, more engaging classroom activities, and stronger relationships between students and faculty.

The main challenge for teachers, however, is related to necessary time and efforts needed for the preparation of the respective courses. Because of that the teachers recommended that faculty start small by modifying portions of their course or, if a full course is desired, spending an entire semester developing their materials.

- **Types of Support Needed for Flipping the Classroom**

- *Resources and training from faculty centers*. Several authors underscored the importance of opportunities for professional development and training, especially regarding active learning techniques and technology support.
- *Adequate time to prepare teaching materials*. To give faculty enough time to flip their courses, it is recommended offering reduced teaching loads, a course release or sabbatical, or giving faculty a full summer to redesign their courses.
- *Support for supplemental grading assistants*. The authors considered this resource especially important for courses that include increased writing assignments as a result of flipping.
- *A reconsideration of faculty duties in nonteaching areas*. The authors suggested that it could be useful to reduce, at least temporarily, some professional and research commitments to allow faculty members to devote more time to teaching.
- *Vocal support from departmental, college, and university administrators*. Administrators need to get fully and vocally behind faculty who are attempting flipped learning and communicate that those faculty are the exemplars, and not crazy outliers.
- *A support group of other faculty members on campus who have flipped or are also flipping their courses so that faculty can work through similar problems together*. The authors reflected on the value of working with colleagues on this kind of effort, and that it should include a forum for sharing best practices for flipping the classroom.

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ANNEXES

Annex 1. Template for Best practices in using the flipped classroom approach

The identification of "good practice" in the e-distance or online learning (EDL), which is based on the flipped approach, depends on some key factors:

- The readiness / skills of a teacher to present the learning content in an attractive way (directly during the training, although in an IT-mediated environment or through a video recording of a lecture / exercise / seminar).
- The applied by the teacher training methodology (considering both the specifics of the discipline and the specifics of the virtual environment for online learning process).
- Structure and content of the e-course, available through Learning Management System (LMS).
- LMS functionality / specifics.

At the same time, the first two factors (readiness / skills and applied methodology) cannot be identified by a "bystander". What is possible it is to *evaluate the structure of the e-course*, its content, as well as the functionalities of the e-system / e-platform, provided that we are allowed to have access to the e-course.

Based on this understanding of flipped methodology, respective guidance, and cited best practices, the following template for gathering Good/Best practices is proposed:

2. **Best practice title** (name of the course included in the study programme, additional workshops/courses/conferences/lectures, other forms)**.**

3. **Year of the beginning of implementation.**

4. **Substantial description.**

   3.1 Reasons to decide to use and apply a flipped methodology

   - Developing independent students' thinking.
   - Developing students' critical thinking.
   - Increasing their capacity for solving problems.
   - Improving communication with students.
   - Increasing interest to the given course.
   - Applying knowledge in practice.
   - Providing more time for active learning activities.

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- Developing spirit of cooperation among students.
- Restructuring the course.
- etc.

3.2. How much units and what exactly units have been prepared for:

- pre-class,
- in class,
- post-class

and what activities students are supposed to do during these three phases.

3.3. What are the support materials or assignments for the pre-class activities (video lectures, presentation, short texts, questions, etc.)?

3.4. What are the activities during the class (Q&A session, discussions on the students' homework and their responses to the questions, small tests, etc.)?

5. **Innovative teaching methods used within the flipped classroom.**

4.1. What innovative methods are used?

- Recording presentation with voice recorded or mini-lectures in video format (how much presentations?).
- The video lectures are uploaded (assuring easy access for students) (in LMS?).
- All the materials available online.
- Division of students into small groups for online discussion.
- Interactive concept map for each chapter of the textbook.
- E-tests for starting and ending a class.
- Other methods such as: quizzes, questionnaires, short writing assignments to hold students accountable, more discussions, etc.

4.2. Changes in the evaluation of students' knowledge

- Does the traditional exam has been replaced by some new forms as a consequence of using the flipped method?
- If yes, what kind of evaluation has been applied (combination of in-class and out-of-class online assignments; questionnaires; short extracurricular writing tasks, etc.?

6. **Online tools used within the flipped classroom.**

- Prezi software (www.prezi.com).
- Screenr (www.screenr.com)
- Coggle.it (https://coggle.it)
- Mindmup (https://www.mindmup.com),

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- Kahoot (https://kahoot.com),
- etc. (See table on p. 75 of the Flipped Methodology)

7. **Background of implementing this best practice** (before the pandemic as a novel way to teach; during the pandemic as a necessity; other circumstances)**.**

8. **Impact on the outcomes of a particular group of students/teachers** (individual teacher's conclusions)**.**
   7.1. What are the teacher's conclusions on using the flipped method in terms of its effects on students' learning? (having more time in class to deepen the student understanding; more personal interaction with different students – more or less advanced; improved communication with students, etc.)
   7.2. How the students 'opinions were collected – through quantitative questionnaire, focus groups, etc.?
9. **Links to the website and any material related to this activity** (visual, text, others)**.**

10. **Contact details** (name, surname, position, institution, E-mail)**.**

Annex 2. Methods and models of online teaching and learning at Sofia University (2019 - 2021)

Dear colleagues, could you please answer the questions below, which are related to the information and methodological support of online teaching and learning at Sofia University. Your assistance will help us in the selection of e-courses, methods and models to be presented as good practices under the project "Activating Students in Online Classes" (KA226 - Partnerships for Digital Education Readiness, Erasmus +). If necessary, you can contact the project management team led by Prof. Maria Stoycheva at: ka226_su@nasledstvo.bg. Thank you for your cooperation and time allotted.

1. Please indicate in which faculty you teach: (more than one answer is possible)

Faculty of Biology

- ☐ Faculty of Theology
- ☐ Faculty of Geology and Geography
- ☐ Faculty of History
- ☐ Medical Faculty

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- ☐ Faculty of Economics
- ☐ Faculty of Classical and Modern Philology
- ☐ Faculty of Slavic Philology
- ☐ Faculty of Pedagogy
- ☐ Faculty of Science, Education and Arts
- ☐ Faculty of Journalism and Mass Communication
- ☐ Faculty of Mathematics and Informatics
- ☐ Faculty of Chemistry and Pharmacy
- ☐ Faculty of Physics
- ☐ Faculty of Philosophy
- ☐ Faculty of Law

1. How many subjects do you teach?

- ○ One
- ○ Two
- ○ Tree
- ○ More than three

2. For how many of the disciplines you teach have you developed an electronic version in the platform of Sofia University (Moodle)?

- ○ For all
- ○ For one
- ○ For two
- ○ For three
- ○ I have not developed

4. If you have developed an electronic version of at least one course that you teach, please indicate whether the e-version contains the following: (more than one answer is possible)

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☐ Annotation of the course (short presentation of "what / why / when / how", what the student should know and can do after the teaching, what activities will be performed by the students during the training).

☐ Requirements for students (obligations and rights; form of intermediate control, form of final examination of knowledge, form of presence and participation of students in the learning process, etc.).

☐ Requirements for the students' own work (for example, requirements for the structure and design of course work).

☐ Main lecture topics (list with a short annotation of each topic).

☐ Main topics of the practical training (seminars, exercises, trainings, field practices, etc.; a list with a short annotation of each topic).

☐ Knowledge map (illustration in a structured form of knowledge for orientation in the network of connections between basic concepts / facts / events related to the topics in the course).

☐ Glossary of basic terms (teacher's reference or reference to a recommended dictionary).

☐ Teaching and learning aids on each of the planned lecture topics.

☐ Teaching and learning aids on each of the planned topics for practical training (seminars, exercises, trainings, field practices, etc.).

☐ Tests for assessment of knowledge on a separate thematic area of the course (two or three for the period of teaching the discipline; current control; conducted online).

☐ Final test to assess knowledge (covers all material from the main lecture topics; conducted online).

☐ Additional multimedia content (video recording (s) of lecture (s) / exercise (s); recommended videos from other sources).

☐ None of the above.

5. If you have developed an e-version of a course that you teach, please choose from the following what is valid for you: (more than one answer is possible)

☐ General presentation (covers the whole topic, builds on concepts, terms, rules, etc. step by step, is characterized by brevity and clarity; provides a minimum of knowledge for the student).

☐ Detailed text on the topic, suitable for self-preparation.

☐ Recommended additional texts (articles, books, parts of books, etc.).

☐ Recommended reading (bibliographic description).

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☐ Recommended sources for additional information (video resources; sites with relevant information on the topic, etc.).

☐ Tasks for self-preparation (including worksheets, where applicable; submitted online).

☐ Tasks for checking the acquired knowledge (test, essay, analysis of previously provided text, preparation for moderating a discussion on a topic set by the teacher, etc.).

☐ Video resources with demonstrations of relevant activities on the topic, where applicable.

☐ Materials for preparation in a discussion, workshop, etc. (according to the discipline and methodology of the teacher).

☐ Gamification materials (according to the discipline and methodology; where applicable).

☐ None of the above.

6. Do you use other platforms and additional software for online teaching, apart from the possibilities of the electronic portal of Sofia University (http://elearn.uni-sofia.bg), where the Moodle software is used?

Please indicate.....

7. To what extent do you use the following method in your teaching practice: blended learning, in which students independently (outside an organized synchronous form of learning with a teacher in a real or virtual classroom) get acquainted with the content on the topic / topics of the course program and the next lesson with a teacher is used for discussions, other active learning activities and checking to what extent the students have mastered the learning content they have become acquainted with on their own (Flipped Classroom method)?

- ✓ Never
- ✓ Rarely
- ✓ Often

8. If you use the Inverted Classroom method, what teaching and learning materials have you provided to students for self-preparation? (more than one answer is possible)

- ✓ Video lectures
- ✓ Texts for acquiring basic and / or additional knowledge

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- ✓ Texts, audio recordings, videos, photos, etc. to prepare for a discussion
- ✓ Rules and materials for conducting independent research
- ✓ Something else

9. Based on your personal experience, please write what activate students in online learning - specific approaches used by you, tasks for group or individual solving, gamification, discussions in which students play a leading role, etc.?

Please indicate.....

10. If you like to join the project "Activating Students in Online Classes" (KA226 - Partnerships for Digital Education Readiness, Erasmus +), please provide an email or phone number.

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