TEMPLATE FOR DEMO SCENARIOS IN USING THE FLIPPED CLASSROOM APPROACH

The demo scenarios for "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.

Based on this understanding of flipped methodology, respective guidance, and cited best practices, the following template for developing of demo scenarios is proposed:

1. **Demo scenario title** (thematic area, name of the course)**.**

2. **Year of the beginning of implementation.**

3. **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.
       - Developing spirit of cooperation among students.
       - Restructuring the course.
       - etc.

3.2. Support materials or assignments for the pre-class activities (video lectures, presentation, short texts, questions, etc.)?

Each demo scenario be required to contain a minimum of five professional video lectures and presentations.

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

Each demo scenario be required to contain a minimum of five in-class activities.

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

Each demo scenario be required to contain a minimum of five post-class activities.

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

    4.1. *Each demo scenario be required to demonstrate* innovative methods.

    - Recording presentation with voice recorded or mini-lectures in video format. A *minimum of five* professional video mini-lectures be required to be uploaded (assuring easy access for students).

    - All the materials be required to be available online.

    - For all demo scenarios, be required to demonstrate division of students into small groups for online discussion.

    - For all demo scenarios, be required to demonstrate interactive concept map for each chapter of the curriculum.

    - E-tests for starting and ending a class are very welcome.

    - Other methods such as: quizzes, questionnaires, short writing assignments to hold students accountable, more discussions, etc. are very welcome

    - Replacement of traditional exam by some new forms (combination of in-class and out-of-class online assignments; questionnaires; short extracurricular writing tasks, etc) are very welcome.

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

    5.1 Each demo scenario be required to demonstrate a minimum of one online Learning Management System (LMS) such as Microsoft Teams, Moodle, etc.

    5.2 Other online learning platforms such as:

    - Prezi software (www.prezi.com).

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- Screenr (www.screenr.com)
- Coggle.it (https://coggle.it)
- Mindmup (https://www.mindmup.com),
- Kahoot (https://kahoot.com),
- etc. (See table on p. 75 of the Flipped Methodology)

are very welcome

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

   6.1. 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.)

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

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

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

SU Moodle course

URL: https://elearn.uni-sofia.bg/course/view.php?id=65856

Course content:

Topic 1: ⊠ Data science

- **Video curriculum Page**

- **Exercise: Information theory Page**

- **Exercise: Types of data URL**

- **Exercise: Clean & Integrate File** 17.6KB Excel 2007 spreadsheet

- **Q&A session in MS Teams URL**

⊠ **Theoretical concepts in Databases**

- **Video curriculum Page**

- **C.J. Date - An Introduction to Database Systems-Pearson (2003) File** 54.6MB PDF document

- **Exercise: Data normalization File** 25KB Excel 2007 spreadsheet

- **Exercise: Data Normalization 2 File** 23.5KB Excel 2007 spreadsheet

- **Solutions Page**

- **Exercise: Car Hire Queries URL**

- **Q&A session in MS Teams URL**

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Topic 2: ☒ Applications in MS Access

- **Video curriculum Page**

- **Exercise: Create database Page**

- **Exercise: Create a database 2 Page**
- **brokerage.accdb File** 1MB application/msaccess

- **Exercise: Data relations Page**

- **Exercise: MS Access Queries Page**

- **Solutions Page**

- **Exercise: MS Access queries 2 Page**
- **stores_clean.accdb File** 896KB application/msaccess

- **Exercise: Car Hire Queries 2 URL**

- **Exercise: MS Access Queries 2 Page**

- **Exercise: MS Access Queries 3 Page**
- **stores_clean_tmp.accdb File** 912KB application/msaccess

- **Exercise: Dates in MS Access Page**

- **Exercise: MS Access Queries 4 Page**

- **Exercise: Crosstab Query Page**

- **Exercise: Crosstab Query 2 Page**

- **Exercise: Reports in MS Access Page**

- **Q&A session in MS Teams URL**

Topic 3: ⊠ Applications in SQL

- _____ **Video curriculum Page**
- **Exercise: Joins File** **488.4KB PDF document**

- _____ **Solutions URL**
- **Exercise: SQLiteOnline.com File** **60KB**

- _____ **Exercise: Assignment for Where operator Page**
- **Solutions File** **42.7KB Image (JPEG)**
- **Exercise: Tasks with GROUP BY File** **58.6KB Image (JPEG)**

- _____ **Q&A session in MS Teams**

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