



Sounds in European E-Learning - SEEL
Grant Agreement No.: 2014-1-DE02-KA200-001631
Project No.: 2014-1-DE02-KA200-001631
Examples of using sound in educational process
Research document for
Intellectual Output No. O1/A2
Project Partner – P4, CTI – RO



EXAMPLES OF USING SOUND IN EDUCATIONAL PROCESS

Sounds in European E-Learning - SEEL
Supporting document for Project Partner
Research paper
February 2015

P4 - Ion I. C. Bratianu High School - CTI - Romania

Applying sound in didactic activity represents a trainers' proof of creativity and a desire for innovation. Here are some didactical strategies in order to use sound in different subjects.

Work safety and health

The classes will be held inside the multimedia lab.

During teaching/learning process there is a film presented where different warning noise happening inside industrial buildings/workshops in mechanical, textile, electronics and automations are presented, as well as warning sounds that give the signal for different crashes or natural disasters.

The presentations are structured on multiple classes, ending with an evaluation process.

During evaluation process, the students listen only the sound part, being asked to recognize the sounds and associating them with the event.

The aim of these lessons consists in preparing the students in order to recognize sounds which are warning them on some events who can affect their health or even their lives.

Mechanical Technologies

The classes will be held inside the multimedia lab.

During teaching/learning process there are presented sounds corresponding to appropriate running mechanical tools - gearwheels, bearings - ; subsequently, there are presented sounds corresponding to a failure: the specific sound for a gearwheel breakdown or the atrophy of the contact distance between the cogs; the sound that appears while atrophy of a bearing ball/roll.

For each one of the studied tools there is presented the sound of a regular running, then, sounds appearing when a failure appears as well as the causes which can cause it.

During evaluation stage, the students will hear the sounds and they will associate the tool with the sound of the appropriate running and the specific failures for the other sounds.

The aim of these lessons is students' preparation in order to recognize the occurrence of failures only due to the sound heard during tools running process and applying the appropriate remedies.

Test

The test can be adapted to all the school-subjects. It will be held inside IT lab, being developed in Microsoft Excel software.

At the beginning of the class, 10 minutes before applying the test, the students will listen to Bach music, in order to have them mentally fit for study/creativity.

The next stage will consist in opening the application and carefully studying the requests and the items of the test.

Subsequently, the students will fill in their responses in the corresponding boxes within the application.

A certain score and sound is corresponding to each correct answer – *the sound of a bell*;

To each of the failed answer there is associated another sound – *the clock “tic-tac” sound (suggesting that a good answer is being waited)*.

The application adds up automatically the scores of the correct answers.

When filling in correctly 25% of the questions, the student is rewarded with a *“one clap”* sound effect; at 50% correct answers, the student will receive *“two claps”*, while, at 75%, there will come *“three claps”*. If all the responses are correct, the student will hear both *“one clap”* and the exclamation *“BRAVOS!!!”*

The aim of the circumstance and test is to induce a state of mind necessary for the development of the evaluation process and the sound rewarding while responding correctly on as many questions as possible.

This way, on a long term, the students will achieve many more knowledge, which will lead to a qualitative bounce in learning process.