

NEStOR

Guide on Developing Educational Scenarios and The Actual Scenarios for The Web Radio to Be Used by Schools

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I. DELIVERY SLIP

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PROJECT SUMMARY

The NESTOR project aims to establish an attractive and modern School Web Radio with Portal which will facilitate the transnational cooperation across Europe making learning more challenging and promoting Radio and other cultural products; it will provide the necessary tools and skills in order to successfully incorporate web-based radio activities into the school's educational settings in an innovative way. The project will provide a robust and safe online platform for web-based schools radio productions, giving them an educational-oriented approach, in subjects such as maths, science, languages, history, literature, journalism and also enables various literacies such as media, information and also critical thinking; enhancing in this way the digital integration in learning and training. Generally, the radio production is addressed to students without discriminations, while no strict assessment within the project is required; this explains the reason why it will be a successful method to motivate all students to learn. Disadvantaged students -even early leavers- will find this very attractive and alluring. Taking into consideration that the radio as a medium helps disabled students to express themselves and socialize, the Web Radio Portal will be designed friendlier for such target groups; for example students with visual disabilities will be given the chance to communicate via the platform with peers and they will find an new way to learn in a very exciting and new way.

The students participating in transnational co-productions with schools coming from different European countries, will enrich their creativity and innovation and will improve their skills at the area of media, journalism and sound engineering, creating for them vocational prospects for the future. In this context the proposed project will develop basic and transversal skills using an innovative method with educational added value, the Web Radio Portal. This applies also to students that are already adults and need both challenge and professional prospects and also skills and dexterities. Both students but also educators and other adult professionals, will find through the learning community the chance to get more on media and digital literacy. This is cultivated through online collaboration, exchange of experiences on the implementation of radio shows, good practices made by other teachers, and help among other professionals and educators, and training courses and seminars. Through the events all teachers who wish to participate as trainees will have the opportunity to be trained for the production process of an educational scenario, to learn who to imply training scenarios in the classroom with support of the mentors of the student radio, within the framework of the curriculum in primary and secondary schools in their educational system.

EXECUTIVE SUMMARY

This document contains a guide to assist educators to develop educational scenarios and the actual scenarios for the web radio to be used by schools. The guide aims to scaffold schools and teachers towards the development and implementation of NEStOR learning scenarios, so as to have web radio programmes by students.



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TABLE OF CONTENTS

1	GUIDE TEMPLATE.....	6
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1 GUIDE TEMPLATE

Guide on developing educational scenarios and the actual scenarios for the web radio to be used by schools

INTRODUCTION

The basic aim of a web radio activity is students to realize that creating a radio program involves the ability to collaborate with others, accepting suggestions and criticisms, and sharing common goals. The planned initiatives aim to develop motivation and create a team where each member is required to achieve the desired result.

What is also necessary is teachers' professional learning on web radio production and media and information literacy. When a school decides to join NESTOR learning approach for web radio programmes, could start its trip firstly by introducing teachers in the school to the web radio production and media literacy. For such a task the educator can refer to output O2A1 (Task 1 and Task 2). This output discusses in depth the importance of information literacy and particularly of the radio to education. It also analyses the required skills and dexterities of students and educators to use Web Radio and Media.

Educators should be able to use, adapt or even design their own learning scenarios for NESTOR learning approach. For this purpose they can refer to output O4. In this output a number of learning scenarios designed, developed and implemented can be a good start for schools to join NESTOR. At the same time, this output introduces educators to a visualised learning design approach that aims in the alignment of knowledge goals along with skills with activities, learning outcomes and assessment.

Below, the educator can find the detailed **steps** that he/she should follow, so as to implement an educational scenario for the web radio to be used by schools.

1. **Educational scenario** (title and short description).
2. **Level of education-students' age group** (e.g. the scenario can be applied to primary school students of third grade). If the scenario accepts an interdisciplinary approach and covers a more general subject like "environment", it can be adapted in some way,

so as to be applied to high school students too. In that case, the educator adapts the teaching objectives to the students' level of knowledge, skills, and attitudes/behaviors).

3. **Subject area(s)** (the educator mentions in which of the course(s) that are included in the curriculum, the educational scenario can be integrated). There are three main types of approaches:
 - *Intra-curricular*: if the educational scenario is integrated into learning outcomes, learning activities, or assessments of an academic course or a teaching program, commonly via collaborative partnerships between academic and external bodies.
 - *Inter-curricular*: if the educational scenario is provided as an add-in session(s) for an academic course or program by external bodies in consultation with or at the request of individual academic staff.
 - *Extra-curricular*: if the educational scenario is provided by external bodies outside of an academic curriculum, and attendance is voluntary.

Advice: Educators who teach a course related to the educational scenario collaborate and help each other, in order for the subject of the scenario to be fully covered. Moreover, they can join NESTOR teachers' community.

4. **Web radio type** (the educator mentions the type of the web radio activity, e.g. interview, reportage, debate, digital storytelling, narration/recorded or live)
5. **Duration** (the educator mentions the specific number of teaching hours needed for the educational scenario to be completed).
6. **Goal** (the educator describes the general goal of the scenario referring to both the curriculum and the web radio context).

e.g. Students must *gain knowledge* on a specific topic, *be sensitized* to that topic, and *be motivated* to participate in the web radio product that they will create.
7. **Specific learning outcomes-aims** (according to the curriculum). The educator, using Bloom's taxonomy verbs for cognitive, affective and psychomotor domain, describes the expected students' learning outcomes in relation to the curriculum subject area(s), digital skills and transversal skills aims. **Note:** aims related to the web radio production should also be incorporated.

- **Subject knowledge aims** - related to the curriculum subject area aims (e.g. students must be able to know, define, locate, choose, make a summary, expand.....).
- **Digital skills aims** - related to the use of digital technologies (e.g. students must be able to approach information and communication technologies in education, to search for information on the web, to acquire skills of cooperative learning creating their audio document through applications that allow shared use, to record their texts, to process audio files with a recording program, like Audacity, to compose a multimodal text using multimedia, to create an interactive online presentation.....).
- **Transversal skills aims** - related to specific attitudes and behaviours developed through the learning process (e.g. the students must be able to develop cooperation and interaction skills, in order to achieve the aims of the cognitive domain, to develop their ability to think critically and creatively, to express their feelings through the recording process, to take decisions, to share their experience with students from other schools encouraging a similar activity.....).

Aims must be realistic, precisely and clearly formulated, and achievable in the certain amount of teaching hours that the educator mentioned before. Moreover, they can both be high and low level. High-level aims are related to the development of specific capabilities, while low-level aims are related to the development of knowledge, attitudes and certain skills.

8. **Relevance to the school curriculum** (the educator refers to the subject areas and give a short description on how they are covered).

Example: Let's assume that the educational scenario is part of the curriculum of literature, language, music and information technology. The educator must briefly describe how all these different areas are covered

- *Literature:* students are looking for poems or quotes from the writings of well-known poets and writers, who have written something related to the context of the educational scenario
- *Language:* students produce a spoken narrative or a written text, improve their vocabulary, search for new terminologies and their meaning, develop their communicative skills while they share their ideas with other students, they learn how to argue, in order to support their point of view
- *Music:* students choose the most suitable songs for their radio show
- *Information technology:* students learn how to record and to process the sound

9. **Roll assignment**

The educator splits the tasks having to do with the web radio activity to different students. The tasks include:

- technology handling (install software, connection to internet etc.),
- sound programs/screening programs/music production programs,

- sound editing
- microphone use,
- information gathering from textbooks, newspapers, internet and other resources,
- music editing,
- announcers/presenters,
- sound engineers

10. Prerequisites/prior skills and knowledge (the educator describes what kind of skills and knowledge the students need to have prior the learning scenario). E.g.

- Students must be able to work collaboratively
- Students must be familiar with new technologies (computer as a tool for learning and searching for information on the internet)
- Students must be able to be working on a text using Google Docs
- Students must be able to visit webpages that extract the sound of a YouTube video to mp3
- Students must have experience in recording programs (Audacity).

11. Brief description of the web radio activity (the educator describes generally the web radio activity and the expected result/general aims).

- The activity may be a digital storytelling, an interview, a reportage, a spoken narrative, a debate etc.
- The educator describes briefly all the steps of the web radio activity.
- Connection with the micro level learning design.

Example: If the web radio activity is an interview that the students take from a person related to the educational scenario, the educator can follow the following procedure:

- He/she urges students to listen to an interview, either on radio or on TV, so that to get some ideas on how they can construct their own interview.
- He/she provides them with some information having to do with the basic rules and steps (a protocol of a successful interview).
- He/she shows examples of interviews and asks from the students to make comments
- He/she gives a specific topic and asks from the students to make questions and find possible answers (students work in pairs, one is the interviewer and the other is the interviewed, all the questions/answers are written down, students are voting for the best ones)
- Students are organizing in groups the final interview.
- Students apply the interview live on the radio using audacity.

12. Technology (microphones, computers, audacity, web camera, printer, scanner, video projector, speakers...)

Assessment of the process (the educator gives a short description on the assessment approaches to be followed referring to both formative and summative assessment, he/she can also use the pilot evaluation tools from output O4).

Assessment can be done through either a *quantitative* research which explains a particular phenomenon by collecting numerical data that are analyzed using mathematically based methods, or a *qualitative* research which provides a detailed description of a given event or phenomenon. Quantitative research techniques are needed when generalizations are needed across a population, while qualitative research techniques are more appropriate when detailed information is needed.

Moreover, there are three types of assessment: *initial*, *formative* and *summative*. With the initial assessment the educator detects students' prior knowledge of a specific subject. Formative assessment occurs during the process of student's learning activities and provides detailed qualitative feedback information about strengths and weaknesses during the learning process. In that stage, students go to google docs and they correct/complete their documents. While students make comments on their peers' documents they learn how to think critically and they improve their speaking. Finally, summative assessment focuses on the end of an event, so as to see if the predetermined objectives have been achieved. The educator discusses with the students what was easy for them during the whole procedure, what was difficult and if they were expecting something more. He/she can provide students with a questionnaire where they will have the chance to express their point of view. The questions can be both closed-response and open-ended questions.

The general goal of the evaluation is to find what students earned after participating in the web radio activity in terms of knowledge, understanding, skills and attitudes. The type of the evaluation depends on the type of the educational scenario. If the scenario joins the curriculum, then it must be considered as part of the general evaluation of the educational procedure (e.g. the educator can check if the students improve their grades in a specific course or if they perform better on a specific written test, after having been involved in the web radio activity).

The assessment of students' work is done both from the students (peer review) and from the educator and has to do with goal/aim achievement, the collaboration between the members of each group, and the expression of feelings (satisfaction, fun, difficulties) during the implementation of the educational scenario.

If the educator considers that it is better to use a qualitative research method, then he/she can use:

- **Observations:** they provide the educator with first-hand information concerning the performances or behaviors of groups or individuals. This method is commonly used to gather data about oral presentations, team activities and seminars. Since web radio activity is a team activity, then this method of assessment can be used.

- **Interviews:** they can be structured or unstructured. Structured interviews include predetermined and unchanging set of questions, while in the unstructured interview the interviewer can deviate from the standard widely used interview questions, so as to probe interesting responses that emerge during that procedure. Generally speaking, an interview works like a mechanism for capturing the participant's thoughts and perspectives. There is also a special type of interview, which is called focus group. This kind of interview takes place with a group of people and it is appropriate when the group dynamics of the interview are expected to stimulate a more detailed response, since the comment of one student may stimulate the memory of another student. The interaction of these thoughts and ideas can contribute to rich and detailed descriptions of the phenomenon of interest.
- **Documents:** they include items such as portfolios, samples of written performance or open-ended questionnaires that are filled by the participants in the web radio activity.

13. **Technical infrastructure** (the educator refers to the technical and digital infrastructure and tools needed) – **preparation of the classroom.** Make sure that:

- there are students in the classroom who are willing to get interfered in a web radio activity.
- he/she has briefly described how web radio works.
- the students know how to search for information on the internet and how to evaluate published information, instead of passively accepting it as legitimate.
- there is connection to the internet.
- the number of computers is enough, so that small group of students can work on them.
- school is fully equipped with all the materials that are needed for a web radio activity (e.g. web cameras, microphones, scanners, video projectors, printers etc.).
- students know how to share ideas and create online.
- students require the basic information and communication technology skills (e.g. E-mail, World Wide Web, multimedia, videoconferencing, skype).
- Audacity and interactive communication tools, such as skype, are available.
- students have access and can work on Google Drive.
- students acquire the required technical skills (e.g. how a microphone works, how they can deal with the sound).
- he/she has organized classroom in a way that helps students to work in small groups.
- he/she has assigned roles to students (researchers of information, announcers, live directors, sound engineers, editors etc.).

14. Pedagogical approach

- Connection with the macro level learning design.
- The educator describes the pedagogical method he/she uses e.g.:

a) Collaborative learning models and zone of proximal development (ZPD)

Collaborative peer groups are groups of equals who learn in a group to share ideas and experiences and to assist one another in solving problems and reach a common goal. According to sociocultural learning theories, the more students engage in group activities and interact with each other, the better they will learn. In a collaborative peer group, students share their views and perspectives with their peers so that they can explore different ways of approaching the learning objects and solving problems. They also can build on each other's contributions to reconstruct their new knowledge and, therefore, construct their own thinking process. One type of peer groups is *problem-based learning model*. Problem-based learning emphasizes collaborative learning. Students explore, solve problems, and understand the process of how the problems were solved, which encourages the deep learning approach rather than simply memorizing the solution. Through solving problems, students learn to effectively find information and critically evaluate information resources; therefore, their cognition is developed. Another type of peer groups is *resource-based learning model*. Resource-based learning is learning directly by engaging with resources. Resources could include books, journals, television, online databases, radio, and CD ROMs. All these sources are considered to be learning tools. It involves a collaborative learning environment where students utilize a variety of information resources to solve problems under the supervision of teachers and librarians and collaborating within their group. Since collaboration between students is one of the most basic elements in web radio activities, collaborative learning models can help both the educator and the students to achieve their goals.

b) Self-determination theory

This theory focuses primarily on three such innate needs: the needs for competence, relatedness, and autonomy (or self-determination). Competence involves understanding how to attain various external and internal outcomes and being efficacious in performing the requisite actions, relatedness involves developing secure and satisfying connections with others in one's social milieu, and autonomy refers to being self-initiating and self-regulating of one's own actions. Intrinsically motivated behaviors are engaged in for their own sake- for the pleasure and satisfaction derived from their performance. When intrinsically motivated, people engage in activities that interest them, and they do so freely, with a full sense of volition and without the necessity of material rewards or constraints. Extrinsically motivated behaviors, on the other hand, are instrumental in nature. They are performed not out of interest but because they

are believed to be instrumental to some separable consequence. The three innate needs that were mentioned before can be seen in a web radio activity, since it combines personal effort with collaboration. The educator should motivate students intrinsically.

c) Social constructivism

Constructivism concentrates on the idea that learners actively build, create, or construct new mental models as a result of their interactions and experiences. Constructivists propose that learners are particularly likely to develop new ideas when they are actively involved in making some kind of external artifact (e.g. a web radio activity) that causes them to reflect upon what they are learning and share that learning with others. Constructivists counter that learning is more dependent upon the types of opportunities or experiences offered than on the learners' maturational stage of development. Learning for the constructivist is viewed as a process in which learners construct meaning rather than merely take in ideas and memorize them. The constructivist model depends quite a bit on social interactions that allow learners to test their understandings against those of others. Social construction of knowledge occurs when communities of learners collaborate to formulate ideas and test the validity of those ideas. Since interaction between students from the same or from different schools is necessary for the completion of a web radio activity, the educator can use this pedagogical approach.

15. Classroom organization (the educator describes briefly the classroom organization referring to the students' and teacher's role).

Desks must be positioned in such a way so as to serve the group cooperative teaching. The educator distributes roles to each group's members, and the final product depends on the effort that each team has made.

The organization of the classroom has two separate forms:

- Each team works individually (students search for information and prepare a written document according to the roles that they were given by the educator and, of course, within their group.
- All teams are working together, they merge the material they produced and they record it.

Role of educator: He/She should be instructive and supportive, and control both the web radio activity and the collaboration between the students. He/She should also observe/check first, if each student responds to his/her duties, and then, if the whole group achieves its goals. The educator should provide students with clarifications and technical/cognitive help, only if it is necessary and students ask for it. The traditional student's role as a knowledge receiver and note-taker also shifts to that of a more active problem solver, contributor, and discussant. The educator is no longer a manager, but becomes the motivator in creating a climate fostering collaborative learning and the guide who aids the students' learning. He/She prepares

and check the webpages that students will visit, prepares the worksheets, and make sure that all groups work properly.

16. Description of activities: the educator describes the activities - each one separately - as detailed as needed. He/She refers to the:

- title of the activity,
- teacher's and students' actions/role,
- expected outcomes,
- learning/classroom organization,
- tools/resources/materials,
- assessment.

(This section can be developed using the micro level design.)

Let's assume that the educational scenario has to do with marine pollution. The educator could do the following:

- **Activity 1: "Brainstorming and initial assessment"**
 - discussion on the subject
 - presentation of specific sources on the web
 - research by students on the specific topic (the educator supports and guides whenever it is necessary)
 - study of digital sources and search for specialized scientists
 - effort to get in touch with them and ask for an interview
- **Activity 2: "Interview-transcription-preparation of the radio broadcast"**
 - interview using teleconferencing
 - students listen carefully and keep notes on their notebooks
 - recording of the interview using an mp3 skype recorder
 - splitting pupils into groups
 - brief presentation of questions/answers of the interview on a written document
 - the students are working on the shared document on Google Docs that has to do with their group
 - in pairs they write dialogues using the notes they have kept before, so as to present them to the radio show
 - they search in www.youtube.com songs related to the topic
 - using the webpage <http://www.youtube-mp3.org/gr>, they extract the sound from a video, they download the files, and they put them in the shared folder on Google Drive
 - they make corrections of their written documents in Google Docs

- they download the songs they have chosen into a shared folder on Google Drive
- the peers make corrections (*peer review*) to the document that contains the text of the broadcasting
- the educator supervises the whole procedure
 - **Activity 3: “Creating radio broadcasting”**
 - using the Audacity students record their dialogues
 - they put songs related to the topic, making at the same time the connection between the song and the topic through comments
 - they process the sound
 - they convert the file to mp3 file format
 - the duration of the broadcasting is 15 minutes
 - **Activity 4: “Promotion of radio broadcasting”**
 - students are divided into groups
 - each group writes an article and send it to other schools to inform them for the broadcasting
 - they create a clever logo to promote the cooperation with other schools
 - they present the beginning time of the broadcast
 - **Activity 5: “Transmission of the broadcasting”**
 - students transmit the broadcasting
 - they record it
 - they communicate with listeners from other schools through the chat of e.g. European School Radio
 - **Activity 6: “Reflection”**
 - students listen carefully to their broadcasting and discuss possible improvements
 - through guided questions the educator elicits the pedagogical benefit of the whole procedure
 - students respond individually to a final evaluation paper for the broadcast
 - the educator provides students with a brief closed-response questionnaire so that to assess the whole procedure. He/She can use the following general questions. The educator can add more questions, according to the web radio activity on which students worked. He/She can also use a class quiz or a multiple-choice examination. Some of the questions can be the following:
 - Did you enjoy the process? (value from 1 to 5, 1= not enjoy at all, 5= enjoy very much)

- Did you find the process easy? (Yes/No)
 - Do you think that using web radio activities in school environment can ameliorate the way that students learn? (Yes/No)
 - Will you interfere again in a web radio activity? (Yes/No)
 - Do you think that your academic achievement was improved after participating in that web radio activity? (Yes/No)
 - Would you like to make your own broadcast live radio and how often? (once a week/twice a month/never/other).
- the educator provides students with worksheets which must include activities that
- have different levels of difficulty
 - promote students' self-sufficiency and creativity
 - require little help from the educator
 - motivate students to think critically
 - can be done either individually, or collaboratively
 - check the achievement of all goals and aims (including those referred to the web radio activity), the educator creates an assessment criterion for all goals/aims, e.g.
 - questionnaires with closed-response questions
 - open ended questions
 - planning activities (to draw something)
 - creation of a mental map
 - problem solving activities
 - metacognitive activities (these activities summarize what students learned and gained after the whole procedure)
 - give to the students the possibility to evaluate themselves
17. **Material and resources** (the educator attaches or gives links to the material and resources needed for the educational scenario implementation, such as presentations, worksheets, student guides, tests, etc.)
18. **Products** (the educator attaches or gives links to the products and artefacts of the educational scenario, such as the web radio broadcast, radio scenarios, interviews questions and results, photos etc.)