IMAGES OF SCIENCES IN THE MEDIA

CENTRE DE LIAISON DE L'ENSEIGNEMENT ET DES MÉDIAS D'INFORMATION - CLEMI

IDENTIFICATION OF THE PARTNER

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Participants	In service training for secondary teachers

TRAINING SCENARIO

Original Title	Les images scientifiques dans les médias
English Title	Images of sciences in the media

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Abstract	This T.S. is based on concepts about image education, the specific representation of sciences and the importance of science in the media. It introduces a reflection about the news development process and the ways the journalists adapt and popularize this specific field. The students will experiment the transfer of this topic in pedagogical activities.
Rationale	Reflection about scientific information is mostly insufficient. We know that media are today the most important agents for the representations in the scientific general culture. We notice important differences according to the different kind of media and to the quality of the mediators. The different sciences don't have the same status within information. Scientific images are essential for the comprehension. They can be very different (graphics pictures, drawing, video etc..) and require specific competences.
Keywords	Images, sciences, reliability, popularization, representation, news development process

PARTICIPANTS

Level of training	In service
Teaching level	Secondary school (age: 12-18)
Number of trainees	25

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AIMS

ME competences	• A 1151 Search, select and evaluate media supports/tools based on pedagogic/educational criteria (suits the best to learning objectives) • A 1121 Use one's own media literacy knowledge (informational, technical and social analysing and producing competences and critical thinking) to teach them to students • A 1122 Use one's own media literacy knowledge (informational, technical and social analysing and producing competences) to supplement traditional teaching strategies with innovative strategies based on the use of multimedia, interaction, collaboration and distance Learning • A 2111 Mobilize methodological and didactic skills for the design, management delivery and evaluation of educational activities • A 2112 Organize time and space in the classroom, using media and new technologies of information and communication, integrating them into the classroom practice
ME (secondary)	
ML competences	• B 11221 Understand/decode/analyse languages specific to pictures and images (e.g. connotation/denotation) • B 1141 Recognize different genres of media (press genres, film genres, advertising genres) and explain their characteristics (languages and forms) • B 1142 Distinguish with critical awareness reliable/not reliable information (according to their languages/representations and forms

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	• B 13111 Identify/recognize an author/ a source
ML (secondary)	
Other objectives	Be conscious of the importance of a relevant scientific information. Develop pleasure and curiosity for sciences
ORGANISATION	
Duration	18 h Face to face: 6 h Online: 8h30 (including 7h30 independent work) Independent work: 11h (including at least 7h30 Online)
Technical tools	Storage and cooperative space. Chat, webinar tool

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CONTENT DEVELOPMENT

Description	Starting with a reflection about scientific information and its different forms of popularization. We have a focus on scientific images and their role for information. At the end of this TS, trainees will conceive pedagogical activities.
Prerequisites	Sciences typology. Image analysis notion Media typology
Structure	**Introducing eMel project and platform 1h** **Unit n°1 / Sciences and their representations in media** Sequence 1: Locate the scientific information and its place in media Sequence 2:Specificity of scientific images Sequence 3: scientific images and their audiences **Unit n°2 / Case studies and tools conception** Séquence 1: Produce a scientific TV news Sequence 2: Conceive pedagogical sequences
Introducing eMel	**1h face to face**

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UNIT N°1/ SCIENCES AND THEIR REPRESENTATIONS IN MEDIA	
Topic	Starting with an analysis of scientific subjects and news in a media panel, identify represented sciences, the modalities of their representation, and specially the different functions of the images
Evaluation of the unit	Restitution with diaporamas Precision, synthesis spirit, analysis

SEQUENCE N°1	LOCATE THE SCIENTIFIC NEWS IN THE MEDIA PANEL (PRINT, TV, ON LINE) NOTICE THE PLACE OF SCIENTIFIC INFORMATION (CONTEXT, PLACE, VOLUME)	
Specific objectives	- Be able to locate and classify according to different criteria in a media panel: represented sciences, what kind of message on which support for which audience. - Identify the notion of sciences	
Time and modalities	1h face to face: Presentation of the media panel. "What is scientific news" Presentation of an analysis grid 1h30 independent work on line: Working on the media panel 1h30 face to face: Analysis of the main results	
Pedagogical methodologies	Comparison, content analysis	
Content	Analyse and classify a panel of scientific news.	1h face to face: What is scientific news

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	Conceive a synthetic report Results sharing	1h30 independent work on line 1h30 face to face
Resources	Media panel, analysis template	
Technical support	Storage space. (documents, diaporamas)	

SEQUENCE N°2	SCIENTIFIC IMAGES SPECIFICITY	
Specific objectives	Notice particularities of scientific images (sources, forms, abstraction vs realism ...)	
Time and modalities	2h independent work on eMel platform	
Pedagogical methodologies	Image analysis	
Content	In the panel used in sequence 1, identifiy images. Classify them according to their forms,Locate their sources. Distinguish their functions: Complete, illustrate, inform, explain	1h reading texts and answering questions 1 h classification according to the functions of the images (Analysis grid)
Resources	Storage space	

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SEQUENCE N°3	SCIENTIFIC IMAGES AND THEIR AUDIENCES	
Specific objectives	Perceive the course of a scientific news from the scientific publication to the mainstream audience news	
Time and modalities	3h on line: 1h Webinar + 2h independent work	
Pedagogical methodologies	Analysis – comparison	
Content	Based on a very detailed example of scientific news, presenting rich forms of image. The trainees will start with another result of research, find different forms of this information in various media. A special focus on the images, their contexts, and the target audiences.	1h online (Webinar) 2h web research and uploading of results on eMel platform
Resources	Storage space, Webinar tools	

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UNIT N°2/ MEDIA PRODUCTION AND TOOLS CONCEPTION	
Topic	The trainees will produce adapted media texts (images, storyfing)
Evaluation of the unit	Evaluation by peers

SEQUENCE N°1	PRODUCE A SCIENTIFIC TV NEWS RELATED TO "ROSETTA MISSION"	
Specific objectives	Find and select adapted resources according to different criteria Use software or application to extract, cut and edit still images and videos	
Time and modalities	1 h independent work on web and on line (tutorial on the digital tools) 2h independent work (in group work) 1h30 Face to face	
Pedagogical methodologies	Production	
Content	Collective production (3 trainees) of a TV news subject (2') of this information. Trainees collect some pictures and videos, select the most relevant, choose their own scope for the news, and produce their own subject using digital tools provided.	1h tutorial (editing tools) 2h independent work in group work 1h30 Face to face: mutualisation and tutorat with the trainer
Resources	On line. Tutorials, videos…	

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Technical support	Collaborative storage space

SEQUENCE N°2	CONCEIVE PEDAGOGICAL SEQUENCE	
Specific objectives	Concerning ME competences and national curriculum, the trainees will conceive a pedagogical sequence with ME competences to achieve within a transdisciplinary way. They will have to think how integrating their sequence in a pedagogical progression (management of time and different levels of digital and media culture among learners).	
Time and modalities	1h30 independent work 1h face to face	
Pedagogical methodologies	Tools conception	
Content	Trainees conceive pedagogical activities according to the level of their students All together, content sharing.	1h30 Independent work 1h face to face
Resources	Collaborative storage space	

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RESOURCES & OUTPUTS

Internal resources	Unité 1 : Sciences and their representations in media Séquence 1 - Producing a scientific TV news related to Rosetta Mission Séquence 2 *Designing a pedagogical sequence* Post-test Questionnaire final e-Mel post expérimentation Servey about e-mel post experimentation Référentiel e-MEL/ Curriculum E-mel - Tutoriel e-MEL – Tutorials E-mel Pré-test For trainer Arguments about mind mapping (trainer) Les images scientifiques dans les médias U1-S1 Grille analyse du corpus médiatique retenu /Analysis grid Synthèse des analyses de contenus /Synthesis

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	Les images scientifiques dans les médias U1-S2 Séquence 2 11 - Scoop-it "Tremblements de sciences", Clemi / *French institutional curation tool* Grille - Image scientifique/ *A template for analysis of scientific images* Les images scientifiques dans les médias U2-S2 Séquence 2 Sciences et médias - fiche pédagogique Clemi *Media and sciences - clemi pedagogical tool* Proposition de progression pédagogique en éducation aux médias - Clemi, *Média & information, on apprend !* , édition 2015-2016 *Media education proposals for pedagogical progression* Structure de la séquence pédagogique / *Organisation of a pedagogical sequence*
External resources	Unité 1 : Sciences and their representations in media Séquence 1 - Producing a scientific TV news related to Rosetta Mission

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Plst-test

Pré-test

For trainer

example: NetPublic - Cartographie des médias en ligne en France (Collégiens de St Sulpice, Tarn)

Tutorial for use: Framindmap / mindmeister

Les images scientifiques dans les médias U1-S1

article Pierre Barthélémy

La science dans les JT - *InaSTAT n°20* > *Site inaSTAT*

Panel of scientific informations media

Le point - Rubrique science 16/02/2016 1, Rubrique science 17/03/2016 2

France 2, 01/04/2016, 13h - Entretien Jean-Didier Vincent Science : le cerveau expliqué à son

Science : le cerveau expliqué à son petit-fils

TF1 - 07/05/2016 20h "Mesurer le niveau de la mer"

Libération - Blog {science²}

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Les images scientifiques dans les médias U1-S2

Photo scientifique - http://www.huffingtonpost.fr */A scientific photography*

Enssib - L'image scientifique Définitions, enjeux et questions -Claire Lissalde

Issues of scientific image usages

1 - Publicité Oral-B

Advertising, ou activez JavaScript dans votre navigateur si ce n'est pas déjà le cas.

2 - Publicité Steradent

*Advertising*rogrammes similaires

3 - Émission "C'est pas sorcier", France 3

Tv show for kids about sciences

4 - Blogue "Tu mourras moins bête" de Marion Montaigne

Blog about science popularisation

5 - Manga "Jin"

6 - Dessin de presse

Cartooning from newspapers

7 - Dessin de presse

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Cartooning from newspapers

8 - Blogue "Les yeux de la science", cnrs Le Journal

Blog of CNRS - Institutional blog (The French center of scientific research)

9 - Animation "Le climat de la Terre", Sagascience

Animated movie about climate

10 - Émission "KEZAKO: Comment un téléphone portable téléphone-t-il?"

TV program about smartphone technology

12 - Journal télévisé "Mission Rosetta", France 3 Centre - Val de Loire

TV news broadcast - locale channel

13 - Article "Climat : chaque seconde, combien de tonnes de gaz à effet de serre [...]", Lemonde.fr

Article from a french pure - player

Climate : greenhouse gas

Les images scientifiques dans les médias U1-S3

Texte typologie des publics de l'information scientifique - 1997

Scientific information - Analysis and comments

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	Preparing for #CometLanding Preparing for #CometLanding (French) *Mission Rosetta : Philae posé sur la comète, mais pas harponné* *La sonde Rosetta a lâché le robot Philae* *Philae s'est posé sur la comète 67P /Revivez l'épopée de Philae* L'épopée télévisée de Philae *par Telerama_BA /Philae TV saga* *L'atterrissage historique de Philae sur la comète "Tchouri" /Landing of Philae on Tchouri* *Résultat de la mission "Rosetta" / Scientific results* Post-test Tutorial : Framindmap / mindmeister
Outputs	Mindmap. Webinar. To produce a short video. Discovering tutorials. To think about a pedagogical sequence. To be able to share with others (face tot face and on line with digital tools)

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