

#### **TEESCHOOLS**

### Transferring Energy Efficiency in Mediterranean Schools

**PRIORITY AXIS:** Fostering Low-carbon strategies and energy efficiency in specific MED territories: cities, islands and remote areas

**OBJECTIVE:** 2.1 To raise capacity for better management of energy in public buildings at transnational level

**DELIVERABLE NUMBER: 5.4.1** 

**TITLE OF DELIVERABLE:** WP5 Open lessons for behavioral change to teachers and students in Valencian Community

WP n. 5: CAPITALISING

ACTIVITY n. 5.4. 1 Open Lessons
PARTNER IN CHARGE: FVMP

PARTNERS INVOLVED: FVMP and Consorci de la Ribera

Status:

Final X
---------

Date March 2020



#### **INDEX**

1.	IN	NTRODUCTION	3
2.	0	DBJECTIVE	3
3.	SE	ELECTION PROCESS OF SCHOOLS	3
4.	M	METHODOLOGY and PREPARATION OF OPEN LESSONS	5
5.	M	//ATERIAL	6
6.	Tł	HE OPEN LESSONS IN VALENCIA AUTONOMOUS REGION	8
7.	C	ONCLUSION	9
8.	PI	HOTOS REPORT	10
8	8.1	CEIP LLUIS VIVES, ALZIRA	10
8	8.2	SANTA MARIA D'AIGUES VIVES, LA BARRACA	10
8	8.3	CEIP EMILI LLUNA, ALGINET	11
8	8.4	VIRGEN DE LOS DOLORES, BENILLOBA	11
8	8.5	SANT FRANCESC DE BORJA, LOMBAI	12
8	8.6	JUAN CARLOS I, ALMENARA	13
9.	C	OMUNICATION IN MEDIA	144



#### 1. INTRODUCTION

Open lessons activities are part of capitalization work package in TEESCHOOLS project where it is important to identify what it has been tested and found previously in the project to implement actions in this last phase.

Open lessons involve students, teachers and technical staff. In the case of Valencian Community, local authorities have also been involved.

The main idea is to transfer knowledge on simple everyday actions and good practices that could be used in schools.

#### 2. OBJECTIVE

Open lessons are aiming at behaviour change of actors on energy saving in school buildings, mainly students because they can actively participate in the change process and transfer that they have learned to their parents, friends and the rest of people.

#### 3. SELECTION PROCESS OF SCHOOLS

Consorci de la Ribera and Valencian Federation of Municipalities and Provinces thought that we had to prepare open lessons actions involving schools from all over the territory in Valencian Community. For this reason, the schools that have been selected for open lessons in our territory are the same that we involved in previous phases of the project because we used the same criteria in that case and,



furthermore, we thought it might be interesting to connect the audit energy conclusions with the content of open lessons.

We were in contact with the staff of the schools to invite them to participate in open lessons as a complementary action to their academic activities. The schools were:

	SCHOOL	TOWN
1	CEIP SANT FRANCESC DE BORJA	LLOMBAI
2	CEIP LLUIS VIVES	ALZIRA
3	CEIP JUAN VICENTE MORA	CARLET
4	CEIP SANTA MARIA D'AIGÜES VIVES	LA BARRACA D'AIGÜES VIVES
5	CEIP LES COMES	L'ALCUDIA
6	ESCOLA INFANTIL MUNICIPAL	MONTSERRAT
7	CEIP BLASCO IBÁÑEZ	ALGEMESÍ
8	CEIP EL CASTELL	CORBERA
9	CEIP EMILI LLUNA	ALGINET
10	CEIP FELIX OLMOS	FAVARA
11	CRA ESCOLES DEL XUQUER	GAVARDA
12	CEIP BALMES	GUADASUAR
13	CEIP SANCHIS GUARNER	LA POBLA LLARGA
14	CEIP SANT BLAI	LLAURÍ
15	ESCOLES DEL XUQUER	SUMACÀRCER
16	CEIP VIRGEN DE LOS DOLORES	BENILLOBA
17	CEIP JUAN CARLOS I	ALMENARA

All the staff of these schools have showed interest in participating in the activities. However, two school have been discarded because their students were too young for this kind of activity.



#### 4. METHODOLOGY and PREPARATION OF OPEN LESSONS

From the beginning, we thought open lessons in Valencian schools should be dynamic activities with the participation of several actors. In addition, open lessons should include the feedback on experiences of students, teachers and the knowledge of Consorci de la Ribera and FVMP acquired along the TEESCHOOLS project.

#### **Students**

We chose the primary school to carry out the audits in Valencian Community because the municipalities pay the energy bills of primary school buildings. To connect the audits and open lessons, we thought students of 5<sup>th</sup> and 6<sup>th</sup> grade of primary schools are the best target because they can understand simple day to day actions to put them into practices but moreover they can understand the results of the audits and recommendations of improvements to their school buildings.

Taking this approach into account, the structure the open lessons has been:

- Presentation of the TEESCHOOLS project and the open lessons activity
- Simple day to day actions to reduce energy consumption in school. Exchange of experiences.
- School Improvements based on the findings of the energy audit in their school

Good practices of day to day actions on energy saving from the students or teachers of each school where the open lessons have taken place are shared with students of other schools involved in open lessons activity.

To adapt the open lessons activity to the normal development of class schedules in the schools we have adapted the open lessons sessions to the ordinary duration of the class thinking no disturb them. Therefore, the duration of each open lessons has been around 45-50 minutes, the same of ordinary class.



Finally, the Local Authorities have been invited to the open lessons in the schools of their municipalities because the findings of the energy audit in their school are presented and it could be interesting for them. In addition, an energy audit report is given to the Local Authorities that are present in these activities.

#### 5. MATERIAL

Each session of open lesson includes mainly two parts: simple day to day actions to reduce energy consumption in school and school Improvements based on the findings of the energy audit in their school. Each partner in Valencian Community has prepared the following power points:

 Valencian Federation of Municipalities and Provinces has prepared the simple day to day actions to reduce energy coonsumption in school:





- Consorci de la Ribera has prepared the school Improvements based on the findings of the energy audit in the school.





# Consum energètic total per alumne (kWh/alumne i any) CCIP Sant Francesc de Borja: 369 XWh/alumne any Et consum energètic depen de moits factors: Nombre i caracteristiques dels edificis 200,00 20

#### Què podem fer per augmentar la sostenibilitat energètica del centre?

- Canvi de caldera de gasoil per biomassa
- Substitució de luminàries que més consumeixen per LED
- Instal·lació de detectors de presencia
- Substitució de les actuals finestres per altres d'alumini amb vidre doble tipus climalit
- Instal·lació de vidre baix emissiu
- Adicció d'aïllament a les parets
- Instal·lació d'una planta solar fotovoltaica per autoconsum
- Implantació d'un sistema de gestió i control

TEESCHOOLS - OPEN LESSONS - CEIP SANT FRANCESC DE BORIA

Moreover, there are some schools which will be involved by Consorci de la Ribera in actions of ESME project, in ENI CBC MED programme, for improving knowledge and reducing the consumption of energy in schools, and, therefore, connected with TEESCHOOLS project. Here the material also used in a few open lessons in the Rivera area together with the material of TEESCHOOLS:



#### Introducció projecte ESMES

- Energy Smart Mediterranean Schools Network
- Programa ENI CBC MED de la Unió Europea
- Promoció sostenibilitat energètica centres educatius del Mediterrani a través de la rehabililitació energètica dels edificis escolars.
- Organització concurs escolar entre 9 centres educatius de la Ribera per fomentar-hi l'estalvi energètic entre la comunitat educativa.
- 36 mesos. 01/09/2019

ESMES - CONCLIRS ESCOLAR

At the end of the open lessons session thermos bottle have given to student and teacher as a gift so that they change their behavior and no use single-use plastic bottles.



#### 6. THE OPEN LESSONS IN VALENCIA AUTONOMOUS REGION

In most schools, we have prepared two sessions:

- students of 5<sup>th</sup> grade of primary schools
- students of 6<sup>th</sup> grade of primary schools

Until now, Consorci de la Ribera and Valencian Federation of Municipalities and Provinces have jointly organized the following open lessons in our territory:



THE REAL PROPERTY.	A STATE OF THE STA
(25)	TEESCHOOLS

SCHOOL	MUNICIPALITY	DATE	SESSIONS	TEACHERS	STUDENTS
CEIP LLUIS VIVES	ALZIRA	25/2/2020	2	4	98
CEIP SANTA	LA BARRACA	23/2/2020			36
MARIA D'AIGÜES VIVES	D'AIGÜES VIVES	25/2/2020	1	3	17
CEIP EMILI	ALGINET	27/2/2020	2	3	51
CEIP VIRGEN DE LOS DOLORES	BENILLOBA	28/2/2020	2	4	23
CEIP SANT FRANCESC DE BORJA	LLOMBAI	9/3/2020	2	3	37
CEIP JUAN CARLOS I	ALMENARA	11/3/2020	3	5	61

The open lessons carried out in Valencia Community have been 12 in 6 schools until 13<sup>th</sup> March, more than those planned in the strategic document for each country. However, that is the date until the schools in Spain were closed due the COVID-19. We had also planned other open lessons that we expect to do when circumstances allow their development.

At least, the schools where open lessons will take are:

- CEIP LES COMES, L'ALCUDIA, 55 students.
- El CEIP EL CASTELL-CENTRE HISTÒRIC de CORBERA, 50 students
- CEIP FELIX OLMOS, FAVARA, 44 students.
- CEIP SANCHIS GUARNER, POBLA LLARGA, 50 students.

#### 7. CONCLUSION

The open lessons activities are one of the most relevant actions of the Capitalization Phase and of the TEESCHOOLS project due the importance to transfer to the educational community a behavior change on energy efficiency in the school buildings.

We have involved schools from different parts of the valencian territory including municipalities in the provinces of Castellón, Alicante and especially in Valencia, mainly municipalities in the Ribera area.

Until now, we have involved around 300 students and 25 teachers in open lessons activity. We must highlight the predisposition and involvement of students and teachers in the open lessons activity besides their awareness for carrying out simple day to day actions to reduce energy coonsumption in school and apply this also to other situacions of their daily life.

#### 8. PHOTOS REPORT

#### 8.1 CEIP LLUIS VIVES, ALZIRA









#### 8.2 SANTA MARIA D'AIGUES VIVES, LA BARRACA





#### 8.3 CEIP EMILI LLUNA, ALGINET





#### 8.4 VIRGEN DE LOS DOLORES, BENILLOBA











#### 8.5 SANT FRANCESC DE BORJA, LOMBAI











#### 8.6 JUAN CARLOS I, ALMENARA



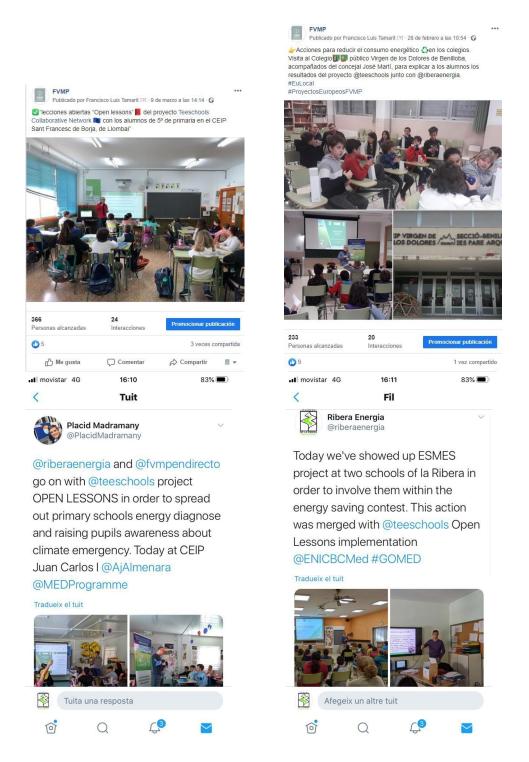








#### 9. COMUNICATION IN MEDIA





→ Acciones para reducir el consumo energético ↓ en los ∰colegios.

Visita al Colegio público Maestro Emilio Luna en Alginet para explicar a los alumnos los resultados del proyecto @teeschools junto con Consorci de la Ribera - Àrea d'ENERGIA #EuLocal

Publicado por Francisco Luis Tamarit [?] - 27 de febrero a las 13:03 - 🚱

#ProyectosEuropeosFVMP



Personas alcanzadas

11 Interacciones

Promocionar publicación



Interreg



## LLIÇONS OBERTES LECCIONES ABIERTAS OPEN LESSONS

