UNIVERSIDAD DE OVIEDO www.uniovi.es

### Introduction

Spanish universities have for some years training activities for adult people. It is an educational model different from their undergraduate and postgraduate courses, and outside the official system of higher education. These courses are taught by university lecturers, are aimed at students over 50 years old and whose origins are very diverse. It is a program to bring the university closer to adults, although it has no official recognition; it is attractive because these people find fun and integrative goals. The lessons are one semester (September to December, or January to May), short duration (15 total hours), and 2 hours per week. The program is distributed in 5 years, with 5 lessons/workshop each semester, and  $30 \in$  each cost. Usually, every student studies 10 courses per year (50 in total).

**Title of this Good Educational Practice** 

Chemistry and Chemical Industry in Asturias

About the experience (Country, city, Institution, academic year, total hours of the activity or complete course)

Course held at the University of Oviedo (Spain) 2016-2017. The total duration was 15 hours.

**Such studies, or type of training in this Good Practice (educational level or type of course)** *Course of cultural content, not officially regulated, aimed at people over 50 years.* 

Descriptive keywords that define this Good Practice

Chemical education, Affective-social development; Intellectual development; Development of basic skills. Goals and competences

We try to get closer to Chemistry and its industry. Also, it was intended to improve students' self-esteem. Some of the competences developed were: ability to analyze concepts, ability to learn, ability to generate new ideas, ability to communicate with experts, competence to apply knowledge in practice, concern for quality and things well done.

#### **Brief summary**

*The topics developed were the basic concepts; the chemistry in everyday life; the mixtures in day to day chemistry from the chemical periodic table; the environment; and the nanotechnology.* 

Students' profile (women and men's number, ages approx., occupation, educational initial level)

In this case it was a small group with 8 students (5 women and 3 men), aged 50 to 70, most were retired people, housewives and a civil servant. Their educational level was high school and graduate.

Staff involved in this Good Practice; and their level of participation (teachers, guidance, other institutions ...)

*The course was taught by a lonely teacher, without the participation of other people.* **Methodology (phases of activity, types of activities carried out, spaces used, etc.)** 

The lessons were theoretical, focused on the use of logic and reasoning of daily problems, everything related to chemistry. It was developed in a small classroom, and some of the methodological strategies were: collaborative work in small groups, use of technological resources, and solving problems. There was also a visit to an industrial factory "Sidra El Gaitero".

**Assessment implemented** 

This course did not have a final grade. It was a mandatory minimum of attendance (80%). There was a final teacher assessment questionnaire by the students.

Weaknesses or difficulties

It was a problem to try to explain certain topics in a single level of knowledge, in a group with students' different level of knowledge. It was difficult to avoid that some people lost the interest by the explanation. **Strengths or success** 

The success was focused on explaining with clarity chemistry topics that are usually difficult; looking for points of interest and current issues related to issues everyone can understand with their basic level of knowledge.

#### Observations

Sometimes the teacher is guided by the evident daily results, without follow a specific procedure, such a continuous assessment; it could be a useful guide to know the educational situation. Here there is no final

evaluation as a record is not necessary, but it would be interesting to keep track of the process in terms of performance levels, motivation, etc.

### UNIVERSIDAD DE OVIEDO www.uniovi.es

## Introduction

This good practice is located in the University of Oviedo, specifically in the University Program aimed at people over 50 years old (PUMUO). Scientific literacy considers that the purpose of teaching science is to ensure that the entire population has such scientific knowledge that allows them to understand the news related to science and technology present in the media as well as to understand chemical information from everyday life, such as drug leaflets or food labels, but in addition to understanding a scientifically literate person, you must make decisions both individually and socially to participate actively as a citizen.

### Title of this Good Educational Practice

Chemistry: Understanding our world of atoms and molecules

About the experience (Country, city, Institution, academic year, total hours of the activity or complete course)

Course held at the University of Oviedo (Spain) during the first semester of the 2016-2017 academic year, 15 hours duration.

Such studies, or type of training in this Good Practice (educational level or type of course)

Chemistry contents specially related to daily life are addressed; directed to people over 50 years old, which allows obtaining a Diploma issued by the Vice-rector for University Extension and International Projection of the University of Oviedo

Descriptive keywords that define this Good Practice

Participatory methodology; Development of autonomy, Life long learning

Goals and competences

1.-To facilitate the knowledge of a scientific discipline to students with varied previous training (in many cases far from the sciences).

2.-To get dissemination of research to society.

**Brief summary** 

Key concepts of Chemistry are addressed (which can sometimes be complex and abstract for someone with little previous training in science) relating them to aspects of daily life (much closer), paying special attention to their relationship with topics of great social interest such as Health, the Environment, Food, nanomaterials, Forensic Science and obtaining energy.

Students' profile (women and men's number, ages approx., occupation, educational initial level)

Retired people in general between the ages of 60 and 70, 65% women and 35% men.

Staff involved in this Good Practice; and their level of participation (teachers, guidance, other institutions ...)

The management team

Methodology (phases of activity, types of activities carried out, spaces used, etc.)

Point of view totally applied to reality, seeking a high degree of interactivity with students. For this, the different contents have been introduced always integrating examples related to everyday life, and leaving time for discussion and debate at the end of the sessions.

Assessment implemented

There was no evaluation.

Weaknesses or difficulties

The time for each session (1 hour) is sometimes scarce in order to address a specific seminar in depth and encourage dialogue and participation of students.

Strengths or success

Teaching methodology, groupings and selection of daily life contents favored a positive attitude and a high motivation in the students.

Observations

It is interesting to note that, in addition to the stated objectives and competences, the method used has tried to favor multiculturalism and concern for quality and well done things.

#### UNIVERSIDAD DE OVIEDO www.uniovi.es

#### Introduction

This good practice is located in the University of Oviedo, specifically in the University Program aimed at people over 50 years old (PUMUO). According to article 13 of the Resolution of June 20, 2017, of the Rector of the University of Oviedo, which establishes the regulations governing the program for older adults (PUMUO) in the 2017-2018 academic year, the program lasts five courses, each year is organized in two semesters, and each semester the student has to choose four compulsory subjects and two optional workshops, aimed at serving the most specific interests of each student. This good practice would be part of the compulsory subjects that all students must complete.

## **Title of this Good Educational Practice**

### Current mathematical problems.

About the experience (Country, city, Institution, academic year, total hours of the activity or complete course)

Course held at the University of Oviedo (Spain) in the year 2016-2017 and with a duration of 15 hours. Such studies, or type of training in this Good Practice (educational level or type of course)

Mathematical content course, aimed at people over 50 years old, which allows obtaining a Diploma issued by the Vice-rector for University Extension and International Projection of the University of Oviedo.

#### Descriptive keywords that define this Good Practice

Intellectual development of students; Development of transversal competences.

**Goals and competences** 

It was about improving the mathematical competence of the students, their quality of life and the associationism.

#### **Brief summary**

Taking advantage of the students' interests, strategy games have been used and mathematical problems have been solved with those found in their daily lives.

Students' profile (women and men's number, ages approx., occupation, educational initial level)

16.7% of participants worked (in the morning) and 83% were retired, with more women (65%) than men (35%).

Staff involved in this Good Practice; and their level of participation (teachers, guidance, other institutions ...)

The management team

Methodology (phases of activity, types of activities carried out, spaces used, etc.)

Although we worked with the whole group in a classroom, strategy games have been used, we have learned to operate with numbers in other cultures, there have been activities of logic and reasoning and problem solving.

Assessment implemented

In order to pass the subject, it is necessary to have attended at least 80% of the classes and obtain a positive assessment of the tasks entrusted by the teaching staff.

## Weaknesses or difficulties

There was no notable difficulties.

Strengths or success

The ability of the teacher to convey to students aspects of mathematics that are not well known and yet are part of daily life in an entertaining, dynamic and participative way.

Observations

### UNIVERSIDAD DE OVIEDO www.uniovi.es

Title of this Good Educational Practice

How to learn to read in several languages at the same time

About the experience (Country, city, Institution, academic year, total hours of the activity or complete course)

Course held at the University of Oviedo (Spain) in the year 2016-2017 and with a duration of 15 hours.

Such studies, or type of training in this Good Practice (educational level or type of course) Linguistic content course, not regulated, aimed at people over 50 years.

Descriptive keywords that define this Good Practice

Approach to reading in different languages; Intellectual development of students; Development of transversal competences.

#### Goals and competences

The aim was to improve reading skills in different languages and for students to discover that they are capable of understanding more languages than they believe. In addition, it was intended to improve the self-esteem of the students. The main competences developed have been: analytical competence, strategic competence, competence to learn to learn.

#### **Brief summary**

Taking advantage of the cognitive similarity between languages of the same family, it has been proposed to read the same texts in different languages, in order to recognize their global meaning without it being necessary to speak those languages.

Students' profile (women and men's number, ages approx., occupation, educational initial level)

A greater number of women than men, over 50 years of age, whose level of education was very diverse: from university graduates retired from their respective professions (doctors, journalists ...) to students who had a high school level of studies.

Staff involved in this Good Practice; and their level of participation (teachers, guidance, other institutions ...)

Different teachers and involvement of the management team.

Methodology (phases of activity, types of activities carried out, spaces used, etc.)

It has started from the teaching of basic syntax and morphology contents in order to be able to use a parallel, transversal reading learning method of different leagues. They have read texts of The Little Prince, Alice in Wonderland, The name of the rose and In search of the perfect language.

Assessment implemented

The course is based on a continuous evaluation, without a qualification. A minimum attendance is mandatory (80%).

Weaknesses or difficulties

The difficulty in balancing the different initial levels of the students and convincing them that it was possible to understand the global meaning of a text in different languages without needing to speak them. This initial difficulty was overcome and in the end all the students could read the same text in different languages.

#### Strengths or success

The ability of the teacher to communicate and the enthusiasm for the cognitive activity carried out.

## Observations

It is interesting to note that, in addition to the stated objectives and competences, the method used favors multiculturalism and multilingualism.

### UNIVERSIDAD DE OVIEDO www.uniovi.es

## Title of this Good Educational Practice

War of the sexes: why are we different?

About the experience (Country, city, Institution, academic year, total hours of the activity or complete course)

This course has been held at the University of Oviedo (Spain) since 2012 to the present. It has a total duration of 15 hours and is taught one hour a week.

Such studies, or type of training in this Good Practice (educational level or type of course)

Course not regulated, aimed at people over 50 years.

Descriptive keywords that define this Good Practice

Affective-social development of students.

Goals and competences

The main goal of this good practice is to improve integration and intragroup and intergroup social relations. It is about improving interpersonal and intrapersonal competence in relation to gender.

The main competences developed through this course are: the ability to analyze concepts, the management of ICT and the appreciation of diversity and multiculturalism.

## Brief summary

Through this course an approach is made, from a biological prism, to the differences between sexes, the understanding of their usefulness for life in nature. The formation of both sexes, from embryology to understand the differences and consequences. Difference to men and women from a cognitive and behavioral point of view.

Students' profile (women and men's number, ages approx., occupation, educational initial level)

The profile of the students is mainly that of a woman over 50 years old, with a very diverse level of education: from retired university graduates of their respective professions (doctors, journalists ...) to students who had a high school level of studies. Some of the students are still in active employment and others in retirement. The course also includes people with disabilities. **Staff involved in this Good Practice; and their level of participation (teachers, guidance, other institutions ...)** 

In this course the main ones involved are the teachers who organize the proposal and teach. It has the support of the Vicerrectorado and the headquarters of the different cities where it is taught.

Methodology (phases of activity, types of activities carried out, spaces used, etc.)

This course, which has been under development for five years, is based on a multidirectional method of knowledge acquisition, encouraging students to ask questions and participate during teacher presentations, so that learning is active. In the programming of the classes in addition to the master class, activities will be interspersed in the classroom, aimed at the student completing the information he has received in the lectures. This course is also supported by the Virtual Campus and can be followed and completed by the students. Classes are taught in a small classroom that also allows group work. The main practical activities that are carried out are mock

exams, problem solving and visualization of scientific videos.

Assessment implemented

These PUMUO courses have the criterion of not requiring an evaluation of acquired knowledge, only 80% of the sessions are required to pass.

Weaknesses or difficulties

While we can not speak of difficulty in itself, if you can appreciate that the students' basic knowledge so different, it makes it a bit more complex to satisfy all students. However, this aspect is also taken as a challenge by making students Participate actively in the classes and complementing higher levels of knowledge through the virtual campus.

Strengths or success

The success of this practice is to listen to students, provide updated information but explained in a simple way and create a good atmosphere in the classroom.

Observations.