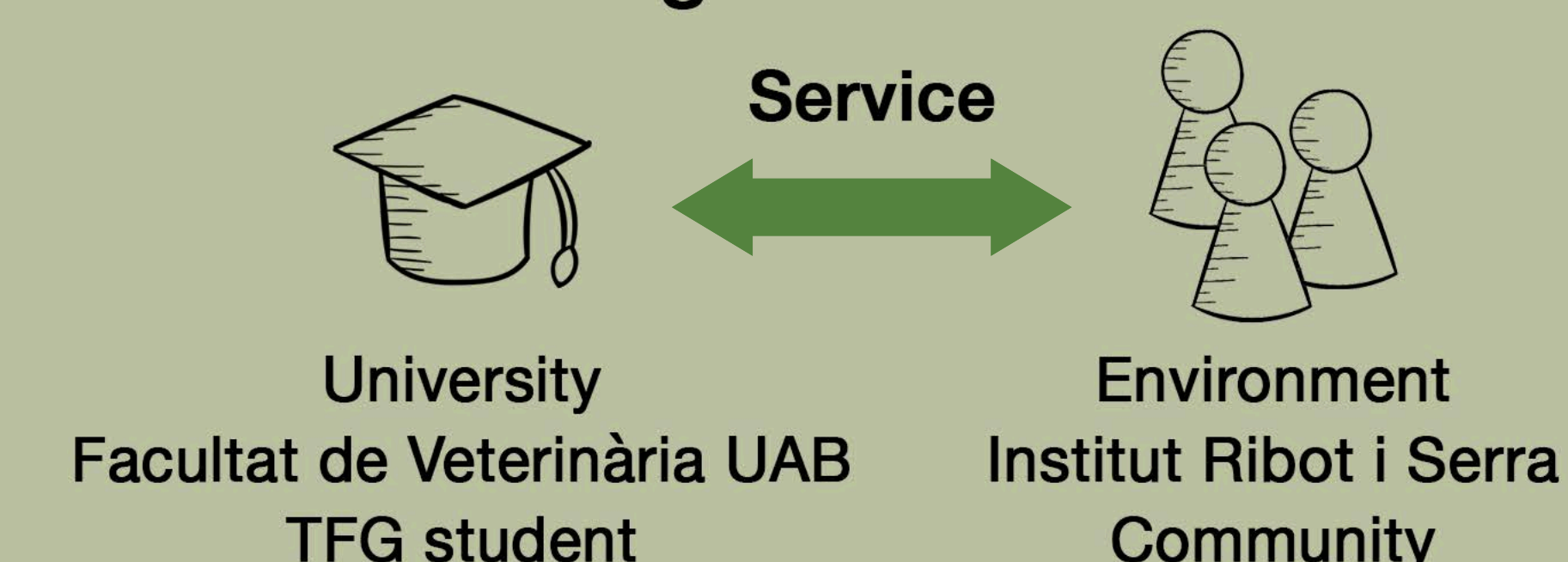


# SERVICE-LEARNING PROJECT: Mammal Comparative Anatomy workshops for secondary school students

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## INTRODUCTION

### Service-learning:



Institut Ribot i Serra (Sabadell)	Improve high school image	General objective
	High-complexity Old facilities High immigration rate Low access to university degrees	
First year of ESO Project Som-Riu	Hold on workshops on the use of morphological differences as classification criteria and dichotomous keys	Specific objective
	Difficulties in identifying species	



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## THEORETICAL BASIS

A **dichotomous key** is a serie of statements about a certain group of organisms that is read in couplets and used to identify an unknown specimen (Vollbrecht, 2014). Dichotomous keys used were adapted from Gállego (2003).

### Anatomical concepts treated:

- Heterodontia / Homodontia
- Hypsodont / Brachyodont
- Dental formula
- Plantigrade / Digitigrade / Unguligrade

## SERVICE DESCRIPTION

The service was divided into three sessions scheduled in three different weeks. The activities were based around a "mysterious skull" found on the Ripoll River.

### 1st session: Presentation



#### Objectives:

- Gain the trust of students
- Assess previous knowledge
- Introduce the concept of dichotomous keys

#### Activities:

- Creation of a dichotomous key with volunteers
- *Guess who?*

### 2nd session: Dichotomous keys practice

#### Objectives:

- Introduce anatomical concepts
- Learn how to use a dichotomous key
- Identify the mysterious skull

#### Activities:

- Identification of different species using skulls, jaws and tracks



### 3rd session: Photography practice

#### Objectives:

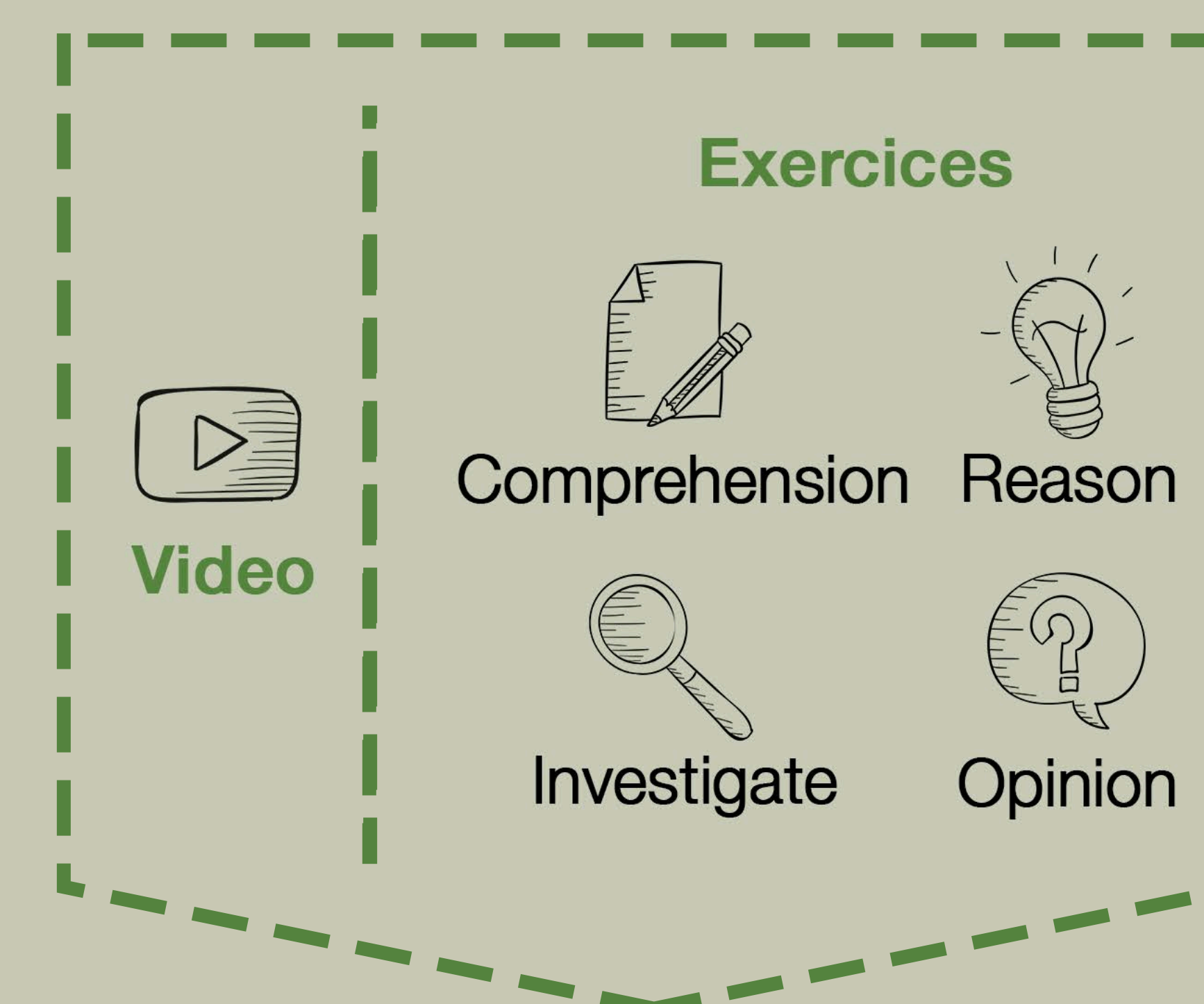
- Improve photography skills
- Get a feedback from students

#### Activities:

- Photography practice
- Poll

## COVID-19 ADAPTATIONS

Second and third sessions had to be cancelled due to the sanitary crisis caused by COVID-19 pandemic (RD 463/2020). They were replanned to be done online via Google Classroom. During four days in a week, the students had to see a short video and do some exercises. They had presentation slides as support.



### 1st activity: Dentition

### 2nd activity: Locomotion

### 3rd activity: Dichotomous keys

### 4th activity: Mysterious skull



## RESULTS

**65,45%** Of the students handed in at least one task

**6,25%** Of the activities were done. Only 5 out of 55 students handed in all the activities

**50,91%** Of the students answered the final questionnaire with an score of 6,78 ± 1,82 out of 10

Low participation was expected due to a high rate of absenteeism before COVID-19 and also to the digital divide.

## CONCLUSIONS

- **Learning by Teaching:** find information and prepare decent materials is a good way to learn about any issue.
- COVID-19 highlighted an important **digital divide** (specially in high-complexity centers) **and the importance of the digital skills**. Adapting the lessons is a challenge for both children and teachers.
- Learning-service approaches are an excellent opportunity for the **vet students to be closer to their community**, as veterinary medicine is a profession at the service of animals and people. It should be encouraged and could be a good approach if routinely integrated into the degree.

## REFERENCES

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