

*The Bio-crime Project/Centre - Veterinary Medical Intelligence
c/o International Police and Custom Cooperation Centre (IPCCC) of Thörl-Maglern (A)*

THE BIO-CRIME SCHOOL'S ONE HEALTH PREVENTION PROGRAM IN ITALY, AUSTRIA, GERMANY, SLOVENJA, MAURITIUS AND JAPAN

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One Health is the idea that the health of people is connected to the health of animals and our shared environment.

When we protect **one**,
we help protect **all**.



www.cdc.gov/onehealth



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One Health approach is a key procedure for **reducing the risk of another pandemic** because understanding environment health and animal health helps prevent the spreading of zoonotic diseases among human population.



>1.700
pathogens
affect
humans



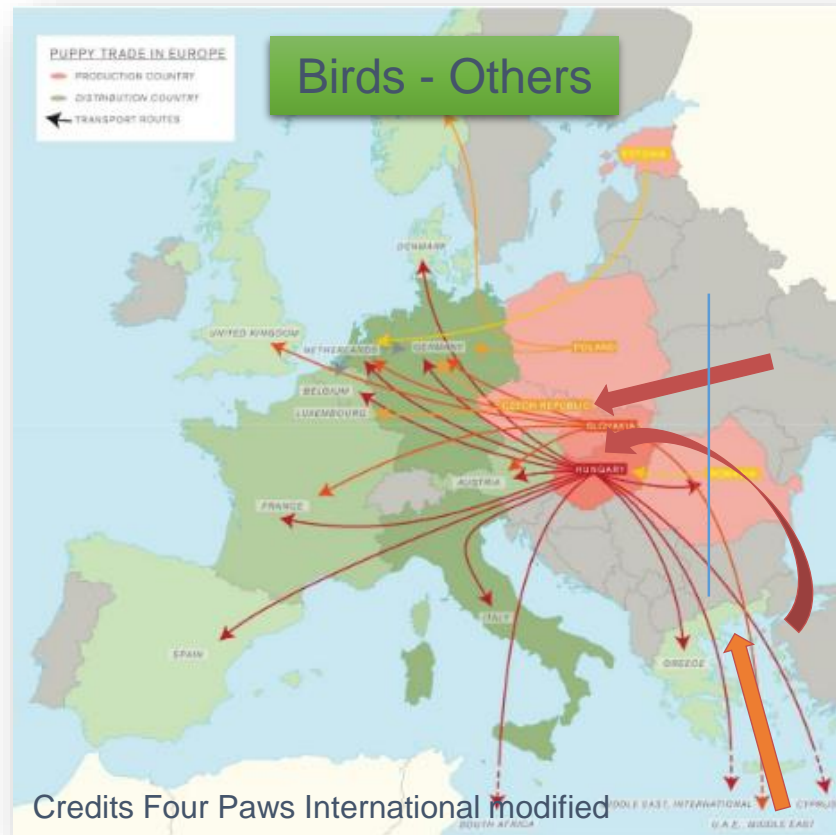
60% of
existing human
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72% of
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About 60% of existing human infectious diseases are zoonotic and at least 72% of zoonoses originate from wildlife or exotic, including the recent Covid-19 pandemic.

SPREAD OF DISEASES - ILLEGAL ANIMAL TRADE



The **spread of diseases** that are transmissible from animals to humans (zoonoses) in the human population is often related to anthropic activities and the **illegal animal trade** is an important route for the transmission of **zoonoses**. Often the final buyers of pets from the illegal market are **families with adolescents** who are more exposed to the zoonotic risk.



1 Human health (zoonoses)



2 Animal health and welfare



3 Market protection



4. Consumer fraud



5 Bioterrorism

According to the **Decision 1082/2013/UE** of the **European Parliament** and of the **Council** on serious cross-border threats to health, preparedness and response planning is an essential element for effective monitoring, early warning of and combating serious cross-border threats to health.



European Parliament



WHO WE ARE



A strong network of cooperation has been set up among the public authorities, including Veterinary Public Health Services, Law Enforcements, Universities, Schools, Customs and the Judiciary system to ensure the project remains sustainable.

PUBLIC INSTITUTIONS NETWORK:

REGIONS, PROVINCE, LANDES, MINISTERIUM, LAW ENFORCEMENTS, GECT Euregio, UNIVERSITIES, HOSPITALS, IZWS BERLIN, MAURITIUS INSTITUTE OF EDUCATION, BURGENLAND, ITALIAN ARMY, HEALTHCARE AGENCY OF TRIESTE, UNIVERSITY OF HOKKAIDO, SCHOOLS, ...

Bio-crime **Veterinary Medical Intelligence** Center Thörl-Maglern

Established by Friuli Venezia Giulia and Carinthia Regions 2019

*c/o International Police and Custom
Cooperation Centre of Thörl-Maglern*

*Established in 2019 as a permanent
cross-border cooperation centre as a
spin-off of the Interreg Bio-crime project*

Focus targets: Education – Training –
Cross border Alert System – Medical
Intelligence – Research – One Health

Veterinary
Public
Health
System

Law
Enforcements

Main programs developed by the Project

- 1. SCHOOL ONE HEALTH PREVENTION PROGRAM**
2. TRAINING COURSES FOR LAW ENFORCEMENTS
3. BIO-CRIME ALERT SYSTEM (Law Enforcements,
Veterinary Services, Justice, Customs)
4. BIO-CRIME CENTER - Veterinary Medical Intelligence

SCHOOL'S ONE HEALTH PREVENTION PROGRAM



1. ITALY
2. AUSTRIA
3. SLOVENJA
4. GERMANY
5. MAURITIUS
6. JAPAN



LAND  KÄRNTEN



Leibniz-Institut für Zoo- und Wildtierforschung
IM FORSCHUNGSVERBUND BERLIN E.V.

2017 – about 300 children

2018/2019 – about 400 children

Theoretical lectures + K9 units Law
Enforcements - practical classroom



Mauritius Institute of Education

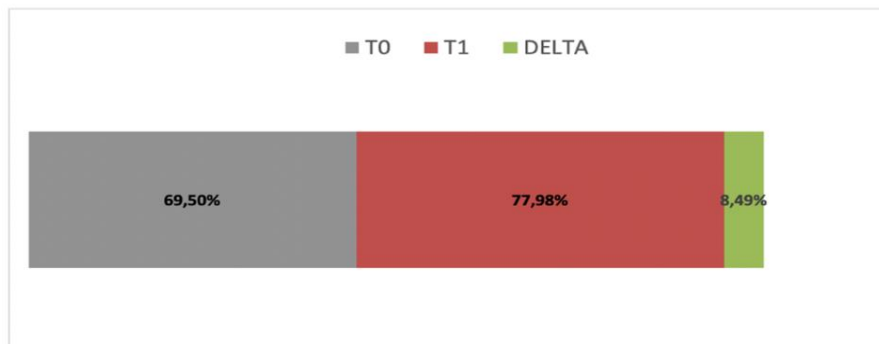
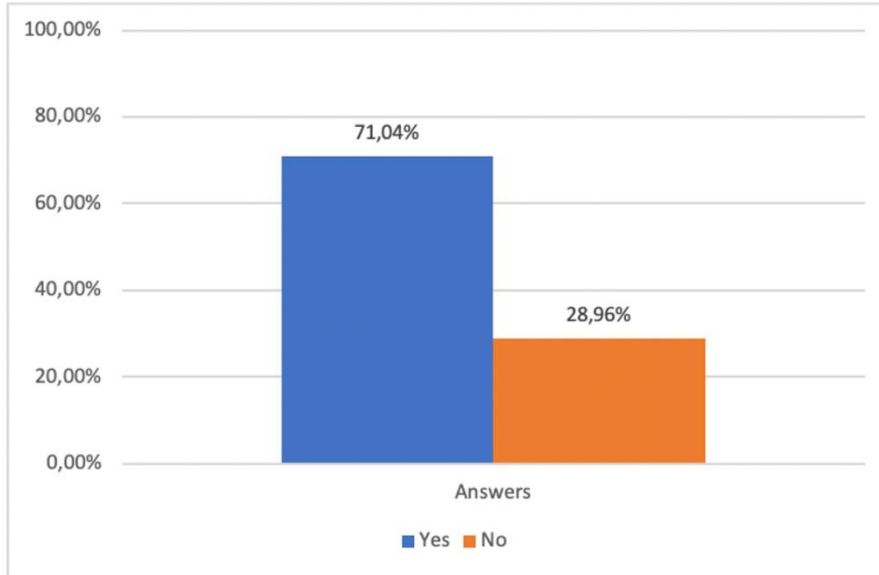


HOKKAIDO
UNIVERSITY

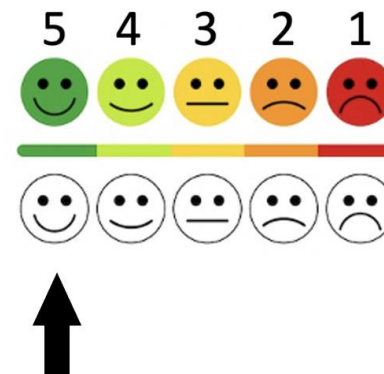
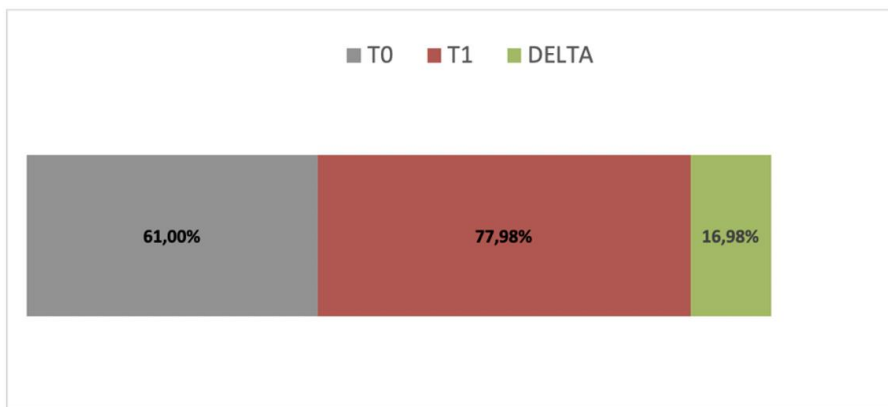
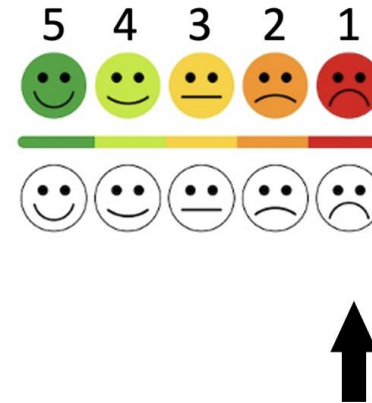
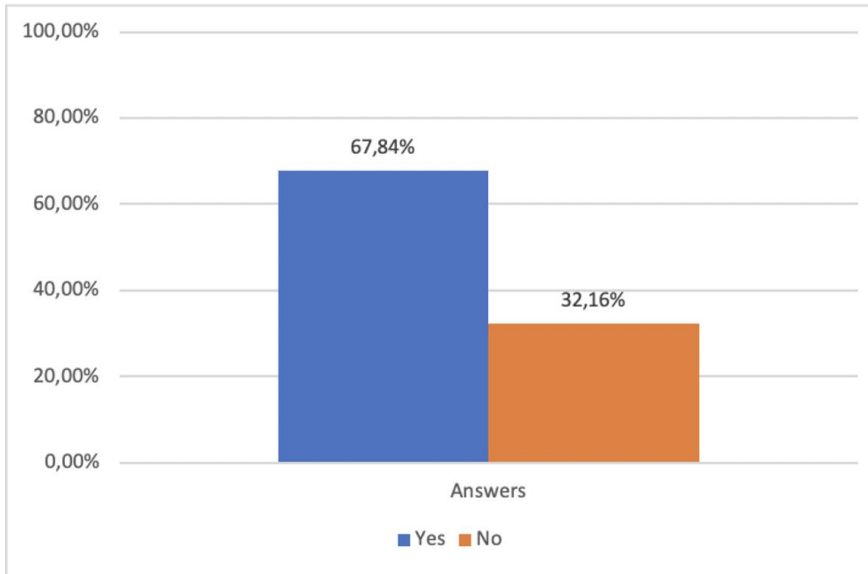
- 4 EU member States (**Austria, Italy, Germany, Slovenja**) 1 African State (**Republic of Mauritius**), 1 Asian State (**Japan**) 656 children 11-13 years-old, years 2018 and 2019
- **Evidence based medicine approach**
- One anonymous questionnaire **before** and one **after** the two lectures, 40 questions on zoonoses, illegal pet trade, One Health
- Assessment of *naive* knowledge
- Assessment of **learning rate**
- Assessment of **teacher's efficacy**
- Assessment of **One Health understanding**



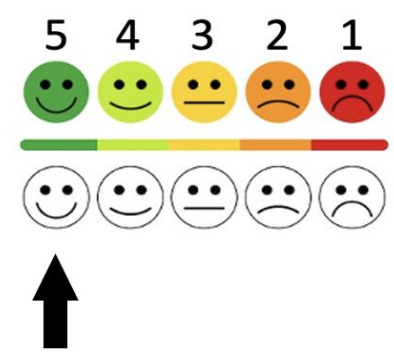
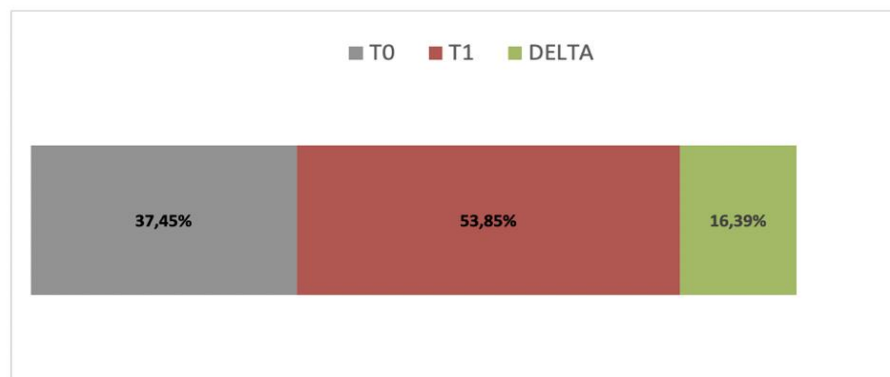
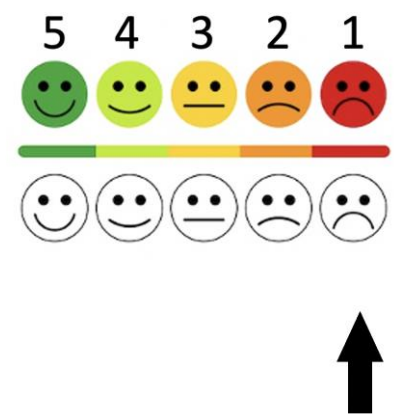
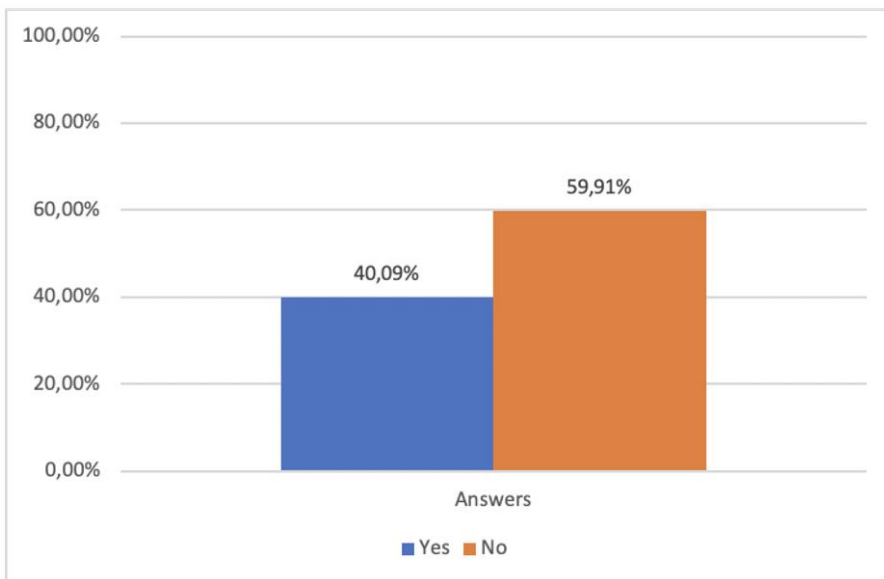
Q: Do many diseases that affect humans derive from animals?



Q: Are zoonoses diseases transmitted from animals to humans?



Q: Can humans transmit diseases to animals?



BIOLOGICAL AND ZOOONOTIC RISK
ONE HEALTH UNDERSTANDING

18-42% of children lack knowledge

AVERAGE VALUE FOR 6 COUNTRIES

31% WRONG RESPONSES

Evidence based medicine approach (EBM)

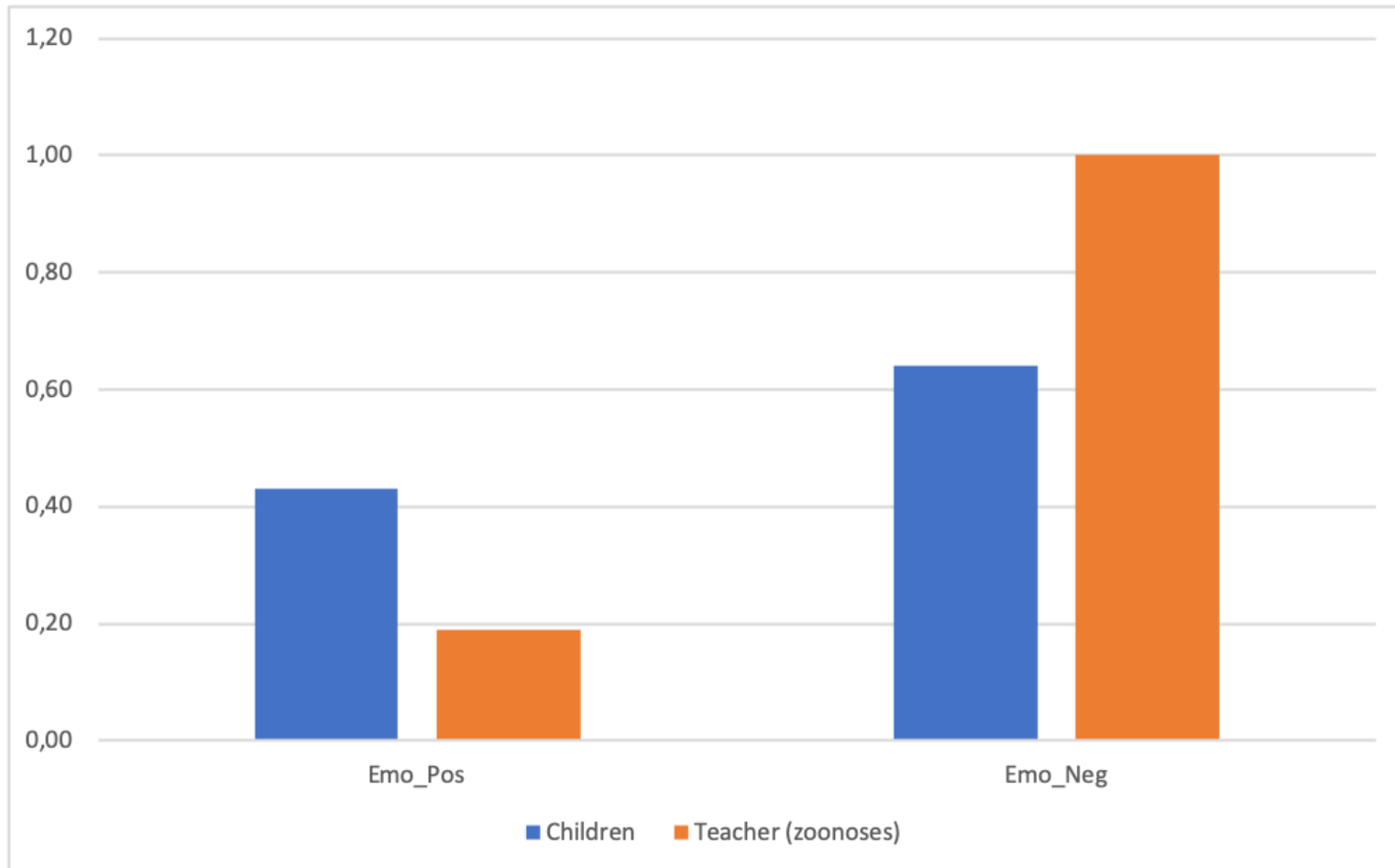
Assessment of program efficacy: 2 lectures & K9 units practical
training increase correct responses up to 15-20%.

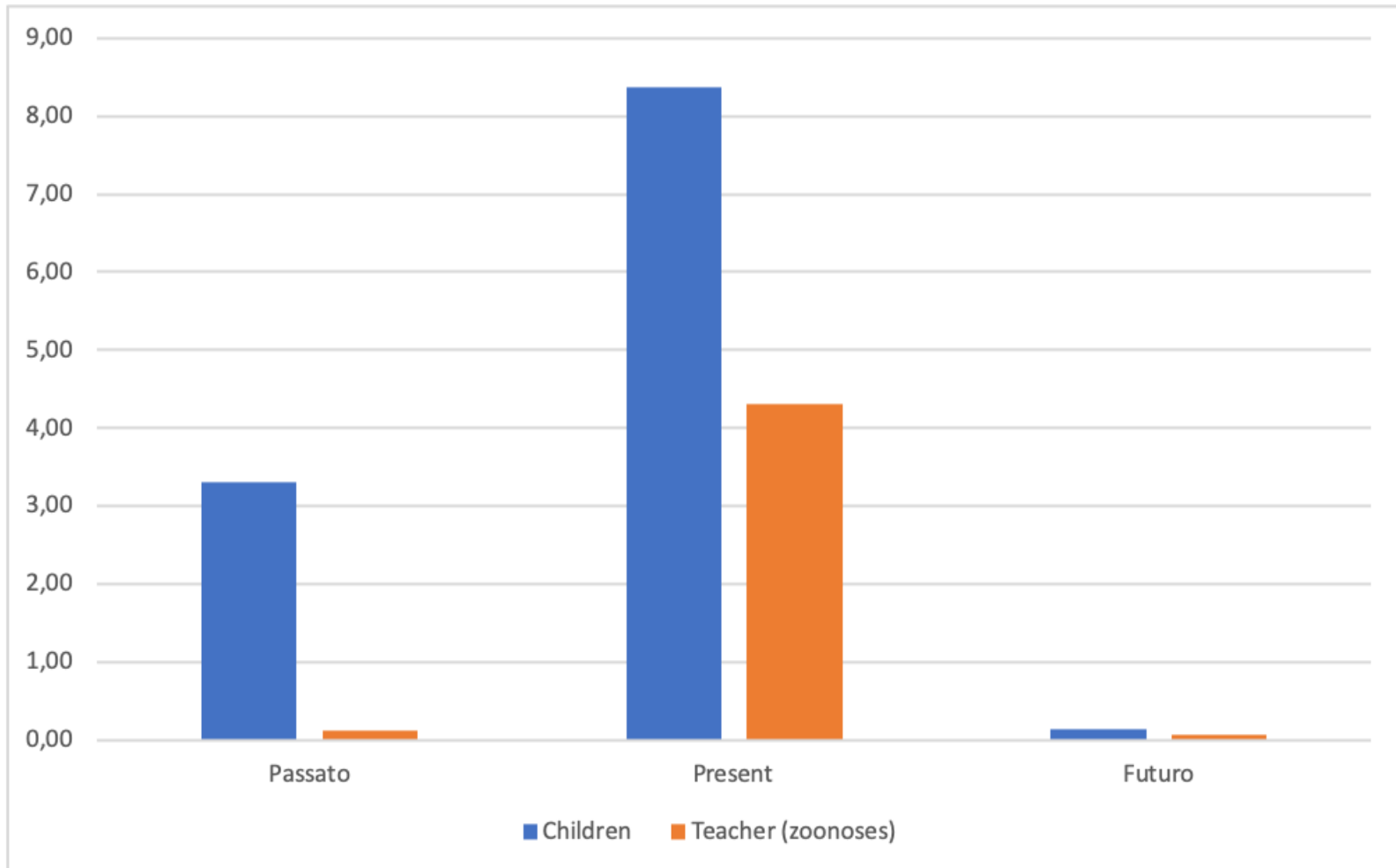
Sentiment analysis It's the process of analyzing texts to determine the **emotional tone** they carry.

In simple words, sentiment analysis is used to find the **author's attitude** towards something. Tools categorize pieces of writing as positive, neutral, or negative.



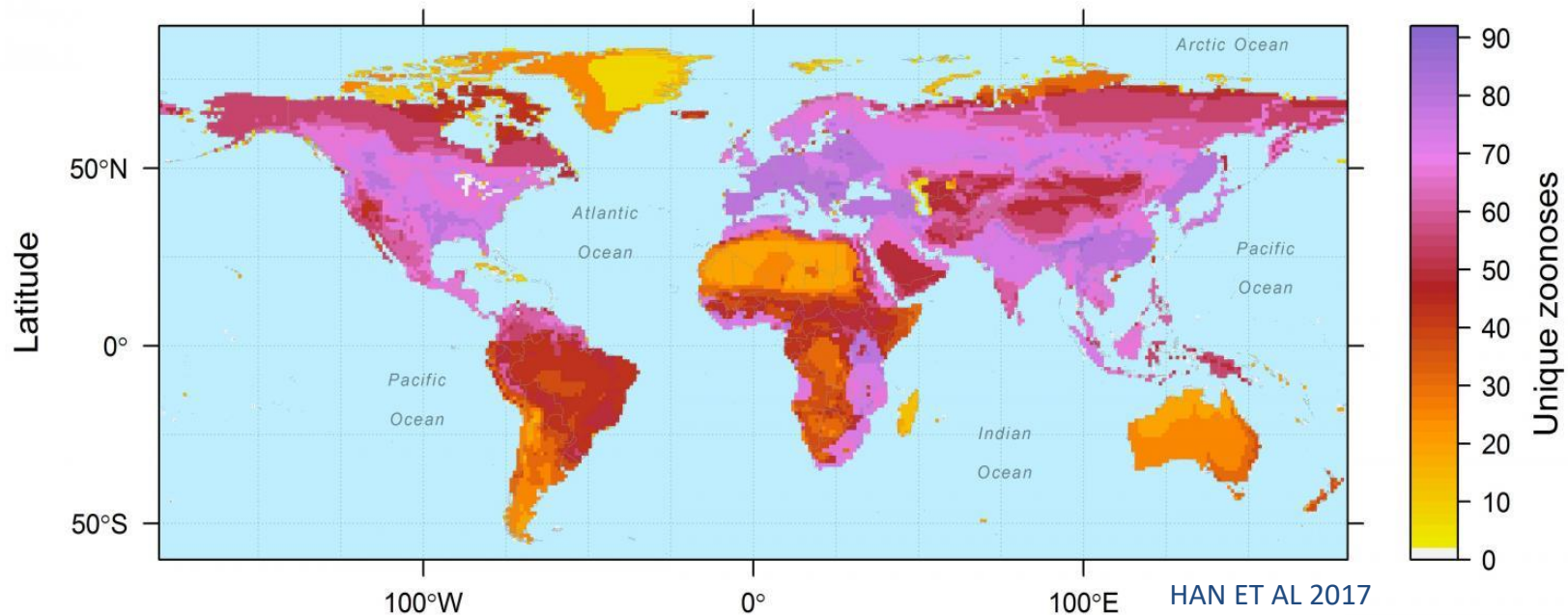
POSITIVE NEGATIVE EMOTIONS





- A **Health Promoting School** is a school that constantly strengthens its capacity to **promote healthy living, learning and working conditions (WHO)**. Children exposed to noncommunicable disease (NCD) risk factors often suffer severe health consequences in adulthood with resulting increased risk of developing NCDs so that **preventive interventions undertaken in developmental phases often have greater benefits** than interventions to reduce risk and restore health in **adults** (WHO 2016).
- More than **one third** of the student cohort investigated shows a profound **ignorance** of the **biological and zoonotic risks**. It is not only an **ethical** problem but also a serious **public health** concern because this means that more than a third of the school adolescent population investigated is exposed to a **higher risk** of contracting zoonotic diseases.
- **Prevention programs** will reduce the potential for zoonotic transmission and **two classroom sessions** delivered at one-month interval seem to be enough to fill the educational gap.

Total zoonoses



- The teaching of the basic concepts of **Health prevention, Biological and Zoonotic risk with a One Health approach** should be included as a **compulsory subject** in all adolescents **school's curricula**;
- Assessment of **Naïve knowledge, Learning rate, Teacher's efficacy and One Health understanding** with an evidenced base medicine approach is essential because **«without data you're just another person with an opinion»** (quote by W.E. Deming).

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