



Institut d'Ostéopathie
de Rennes-Bretagne

Exploring the influence of two learning activities on the anatomy experience of osteopathic students.

30th Sept. 2022 - ANTWERP

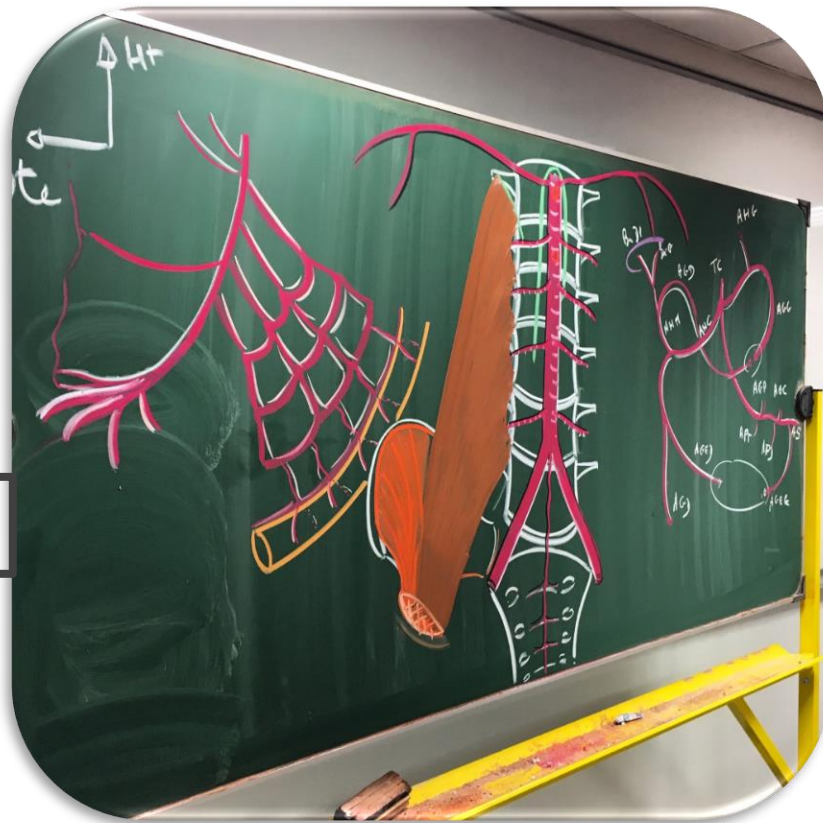
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Physiology

Semiology

Pathophysiology



Academic curriculum

Clinical practice :

- Reasoning
- Techniques
- Communication

Background
Introduction





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de Rennes-Bretagne



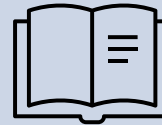
Rembrandt – La leçon d'anatomie du docteur Tulp

Anatomy, the key subject



Biomedical science

Clinical practice




Background

Introduction



1. **Student's engagement** 

2. **3D visualisation** 

3. **Clinical reasoning** 

4. **Classical VS reinforcement courses** 

Issues

Introduction

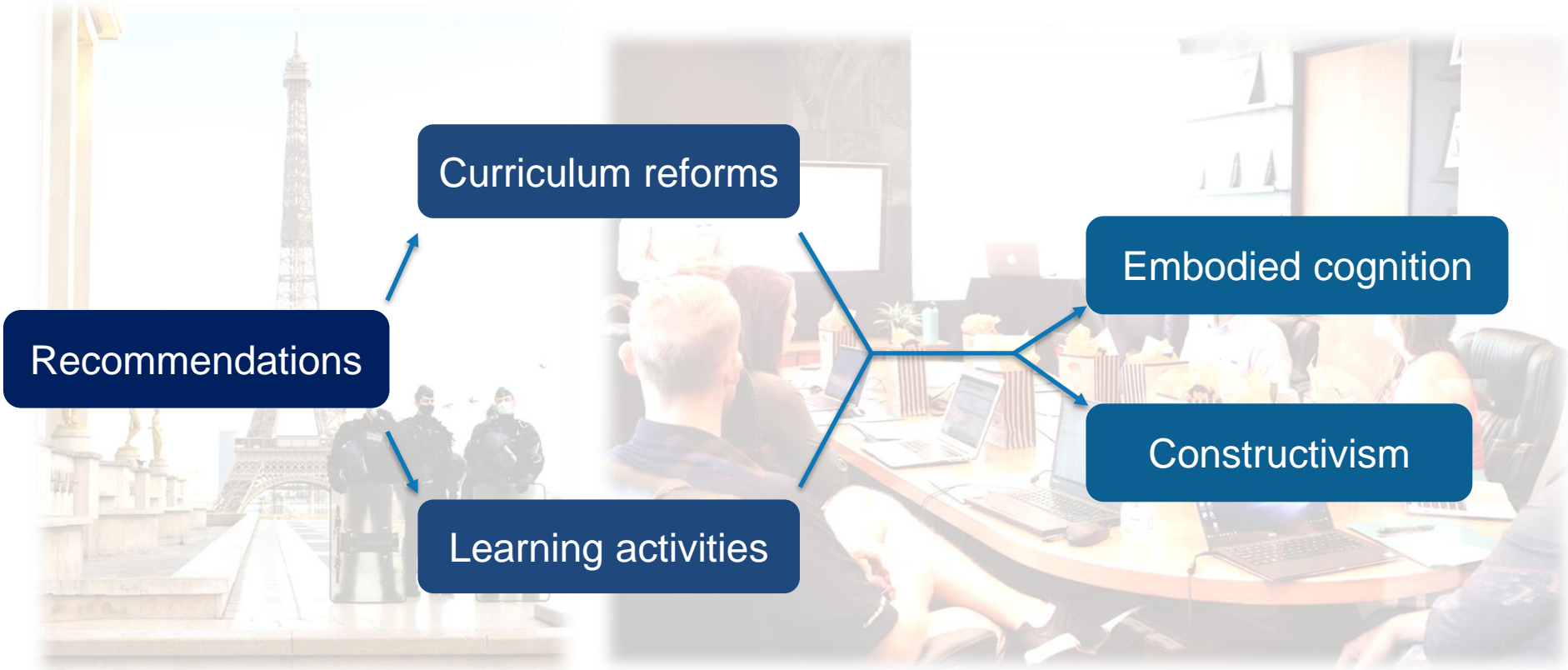
Kerby et al. (2011) doi.org/10.1002/ca.21059

Bergman et al. (2011) doi.org/10.3109/0142159X.2010.536276

Preim & Saalfeld (2018) doi.org/10.1016/j.cag.2018.01.005

Keenan & ben Awadh (2019). doi.org/10.1007/978-3-030-06070-1_4

State of Art



State of art

- Studies are mainly focus on **student's satisfaction**
- A lack of understanding the **expectations** of the students
- Understand how **learning activities** can have an impact on students



Clunie et al. (2018).doi.org/10.1002/ase.1762



Aims

To assess :

1. the students' perceptions toward the introduction of innovative teaching strategies
2. the anatomic knowledge acquisition and its subsequent clinical application

Reinforcement learning activities

Methods

3h per activities

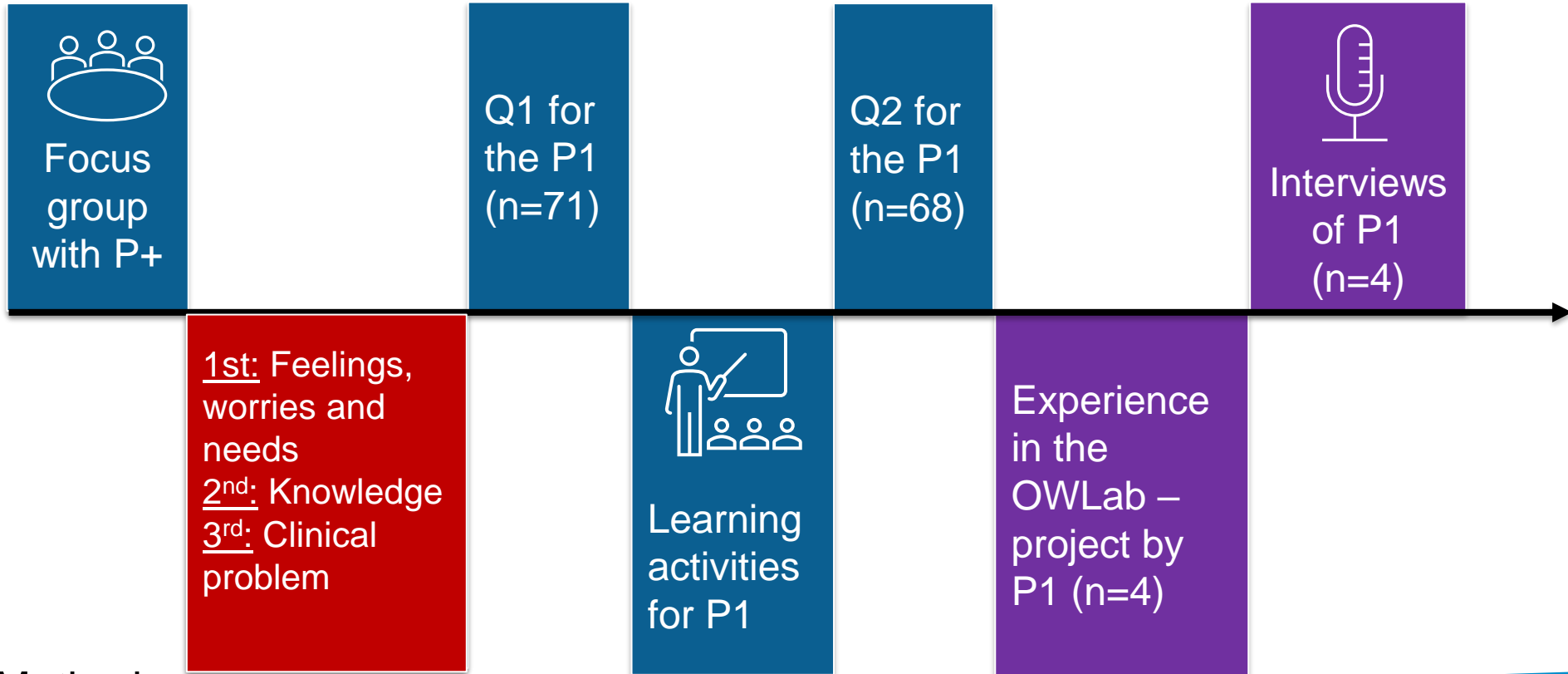
Small groups

1. Body painting

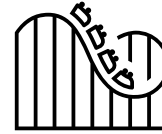
2. Serious game:
snakes and ladders

Bonus: OWLab-Project
(VR, 3D prints)

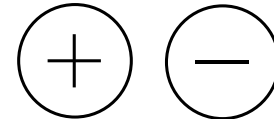
Process and assessments tools



- Participants: 5
- Duration: 1 hour
- 3 main themes : - Anatomy - a course of **commitment, expectations** and **stress**.



- A **critical look** at course formats.



- Suggestions for **solutions**.



Focus group

Results

Questionnaires

Evolutions

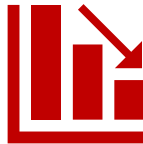
Improvement

- Learning facilities
- 3D Visualisation
- Quantity of information retained
- Need of new learning activities



Decrease

- Exams preparation



No change

- Perceived anxiety
- Quantity of personal work
- Work methods
- Easiness to solve a clinical vignette
- Etc..

Results

Questionnaires

Knowledge

Level of self-rating knowledge

Before: <10/20

After : >10/20

Number of correct answer by questions

Before: 46%

After : 65%

Clinical reasoning

Percentage of **responses with more than 1 anatomical** components cited:

- From 54% to 90%



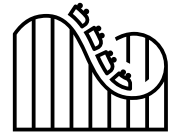
Percentage of answer of **clinical reasoning developed:**

-From 17% to 7%

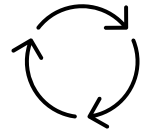


Results

- Participants: 4
- Duration: Between 25min and 45min
- 2 main themes : - Anatomy - a course of **commitment, expectations** and **stress**.



-New learning activities: tools to **be developed** to **complement** traditional courses.



Interviews after OWLab-Project session

Results

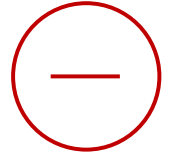
Strengths and limitations

Strength



- 3 assessment methods
- The number of participants for the quantitative part
- Ease of replication of the evaluated activities for an another institution

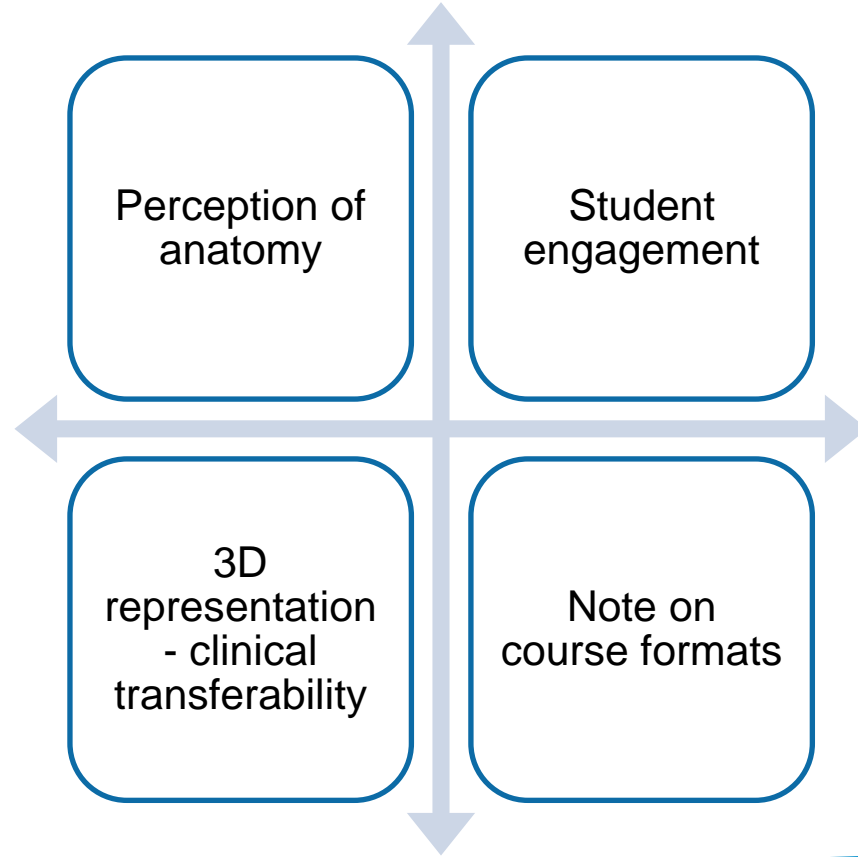
Limitations

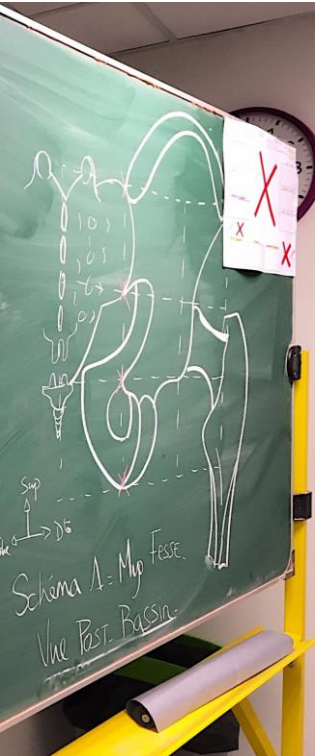


- Limited transferability and reproducibility.
- Evolution may be due to personal work.
- Lack of data saturation.

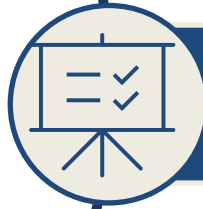


Previous study findings





Less centered on students individual preferences (V.A.R.K. Model).



More focus on the educational objectives.



Incorporate more clinical context within basic sciences.

Teaching perspectives

Discussion



Snakes and ladder

Question 1

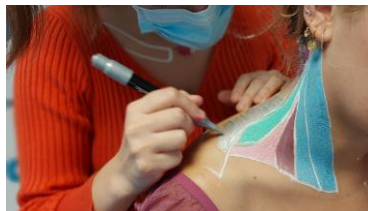
D'où provient le nerf cutané latéral de l'avant-bras ?
à quel niveau devient-il cutané ? En combien de
branches se divise-t-il ?

- Réponse :
- Branche terminale N. Musculo-Cutané
 - Après avoir traversé le fascia brachial face antérieure du coude
 - 2 branches terminales (antérieure et

Snakes and ladder



Body painting



Body painting



3D prints



3D prints

Thank you

For your ATTENTION

