

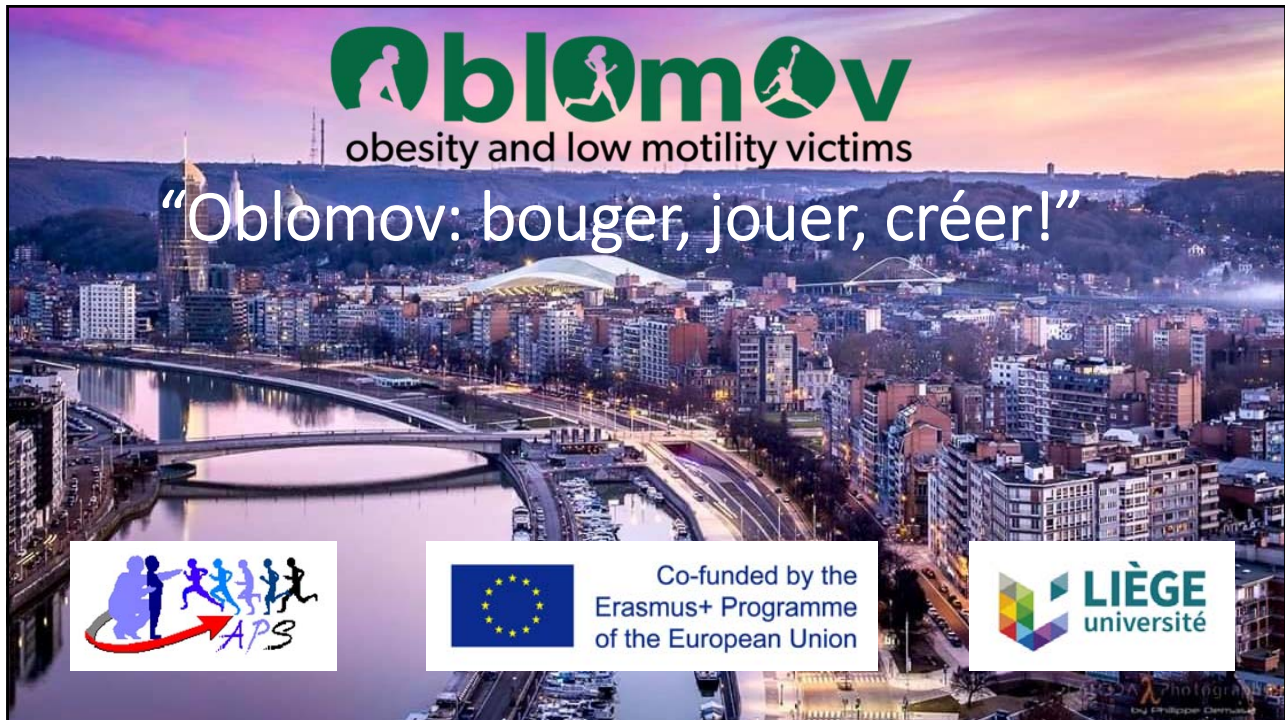


Combining HIIT, open scenarios, and health recommendations: Implementation of the OBLOMOV method in Belgium

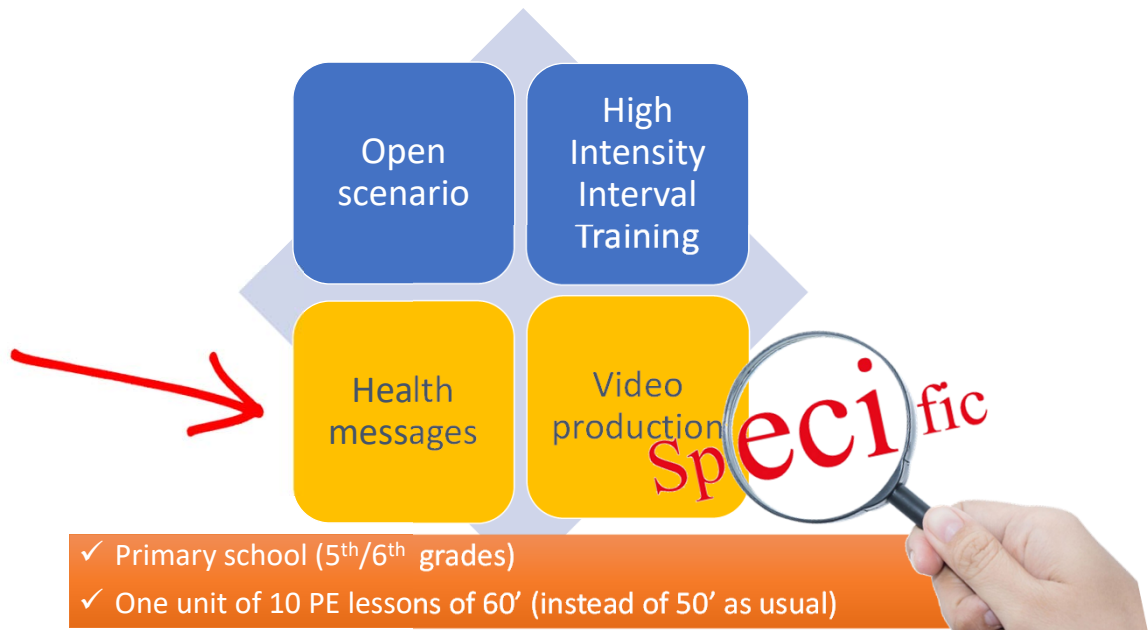
Nicolas Franck, Maurine Remacle, Alexandre Mouton & Marc Cloes
Edinburgh, 25th July 2018



Co-funded by the
Erasmus+ Programme
of the European Union



General principles applied in Liege



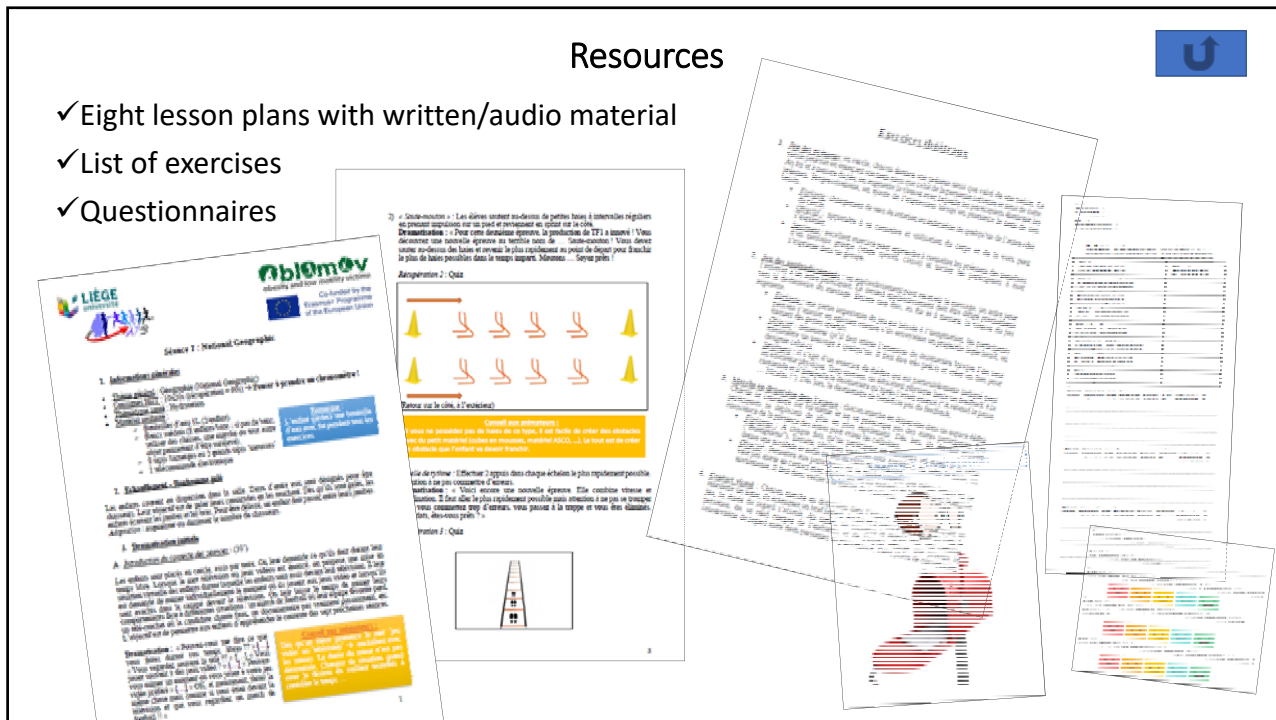
Project overview

| | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Lesson 7 | Lesson 8 | Lesson 9 | Lesson 10 |
|----------------------|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|----------|-----------|
| Open scenario | National Geographic | Eurosport and the Olympic Games | 24 | Survivors | Ninja Warrior | Fort Boyard | The Simpsons | Preferred lesson | Video | Video |
| HIIT Protocol | 10 x 20s Rest = 90s (Ratio 1:4) | 10 x 20s Rest = 90s (Ratio 1:4) | 10 x 30s Rest = 90s (Ratio 1:3) | 10x30s Rest = 90s (Ratio 1:3) | 10x40s Rest = 90s (Ratio 1:2) | 10x40s Rest = 90s (Ratio 1:2) | 10 x 45s Rest = 90s (Ratio 1:2) | 10 x 45s Rest = 90s (Ratio 1:2) | Video | Video |
| Health topic | Hydration | Recommendations Physical activity | Breathing and effort management | Balance food | Posture, back ergonomics | Sleep | Sedentarity, inactivity | General knowledge about sport | Video | Video |

Resources



- ✓ Eight lesson plans with written/audio material
- ✓ List of exercises
- ✓ Questionnaires



The scenarios



7 scenarios based on popular TV programmes :

1. National Geographic
2. Eurosport
3. 24h
4. Survivors
5. Ninja Warrior
6. Fort Boyard
7. The Simpsons





Example of scenario

The teacher places children in the context of the Olympic Games. The children arrive in a huge stadium. The stadium is filled with spectators. We hear trumpets, drums (*audio sequence!*). The fans scream and chant the names of the children. There is an athletics track with a green area in the center. From a distance, there is a velodrome and, next door, a sports hall. The children understand that they have landed at the Olympic Games. They replace the athletes and must perform the tests. These Olympics are special in that they involve performing well in sports events but also in cognitive tests (quiz).

Open scenario for the exercises

Round trip sprint (MINF) : The queen of athletics par excellence, the 100 meters! It's about running from one cone to another as fast as you can for 20 seconds.

Dramatization (take the role of a journalist commenting): Presentation of the sprinters: "In the lane number 1 ... Jean! etc. "Once the presentations are made, we start the 100-meter run:" On your marks ... Ready ... Go "



Example of scenario

Today, the children arrive in a house that they recognize ... the house of a famous US family : the Simpsons !!! They will have to learn to live together and do the daily tasks of the Simpsons to hope to come out of the episode. **Dramatization** : «« Where are we??? » [...] « Ooooh ! Do you see the house over there ? » [...] « Do you recognize it ?!! It looks like there is a quite big man, yellow, who eats donuts ! »

Open scenario for the exercises

Crunches : The children have to put the laundry in the laundry basket in front of them. To do so, they will have to perform abdominals. **Dramatization** : « Wow! you've seen all that laundry ? » [...] «Which room do you think we are in? Bart's, no? What do you think ? » [...] «We came to rest and we must put away, pffff» [...] «Well, let's put this laundry in the bin in front of us ! Go, go, go !! »





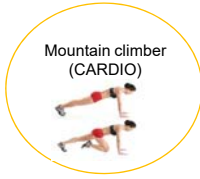
The High Intensity Intervals

Progression :

- Séances 1 et 2 : 20" exercise – 90" recovery (1:4)
- Séances 3 et 4 : 30" exercise – 90" recovery (1:3)
- Séances 5 et 6 : 40" exercise – 90" recovery
- Séance 7 : 45" exercise – 90" recovery (1:2)

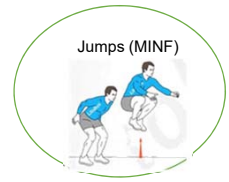
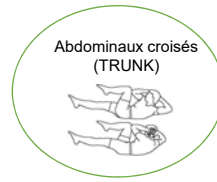
Variety of the exercises

1. Muscle strengthening with small equipment
2. Muscle strengthening without equipment
3. Cardio-respiratory endurance exercises
4. Round-trip runs
5. Plyometric and jumps
6. Games of opposition



Types of efforts :

- Upper body (arms)
- Abdominals, back muscles
- Lower body (legs)



Health education activities

Quiz on back ergonomics (10 questions)

- At the sport hall, when I have to carry a bench with a friend ...
- ... I lean forward to grab it and straight up to lift it.
 - ... I raise it without thinking.
 - ... I bend my legs to grab him and hold them to lift him.



7 health topics:

1. Hydration
2. Physical activity recommendations
3. Breathing and effort management
4. Balanced food
5. Posture/back ergonomics
6. Sleep
7. Sedentariness, inactivity
8. General knowledge on sport

Use of bottles of water

- Show the amount of water to be ingested daily using bottles
- Does it differ by sex?
- Does it differ when playing sports or physical activity?
- What consequences if you do not drink enough? Can we drink too much water?
- Show how much soda should be ingested daily
- Pyramid of hydration



Brainstorming by groups on sleep and sharing of ideas

1. Why is it so important to sleep well?
2. Name 3 good habits to sleep well
3. Name 3 bad habits that prevent you from sleeping well
4. How many hours would it be ideal to sleep per night?



True / False about recommendations and definition of physical activity

1. Define the concept "physical activity" (distinction physical activity-sport, 5 dimensions of physical activity)
2. True or false
 - I must be active at least 1 hour every day, even on weekends. T-F
 - 10 minutes of physical activity is not enough to have positive effects on health. T-F

Health education activities

Ton code secret:

La thématique santé que tu as appliquée en dehors du cours (entoure ton choix) :
 hydratation/recommandations en activité physique/
 respiration et relaxation/alimentation/protège ton dos/
 sommeil/sédentarité

Qu'as-tu fait concrètement, la semaine dernière, pour appliquer ce que tu as appris dans cette thématique ?
 (Explique en quelques mots)

Vas déposer ta fiche dans la bonne boîte aux lettres 📧

Post it: At the beginning of the lessons (2^d to 8th), the pupils are invited to write good practices of using health messages that they learned since the beginning of the Oblomov unit ...
 What? Self-confidence to implement?

9th and 10th lessons

Groups of 4-5 pupils

Creation of a scenario

A short story

5 minutes, 3 exercises

Video prepared by the teacher

C R E A T I O N

Resources

- ✓9th and 10th lessons plans with written material
- ✓Instruction booklet

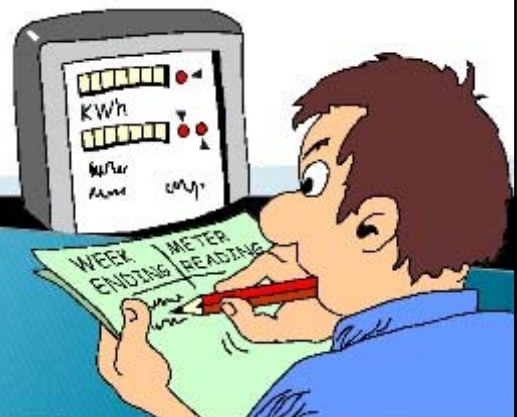
The collage features three main documents:

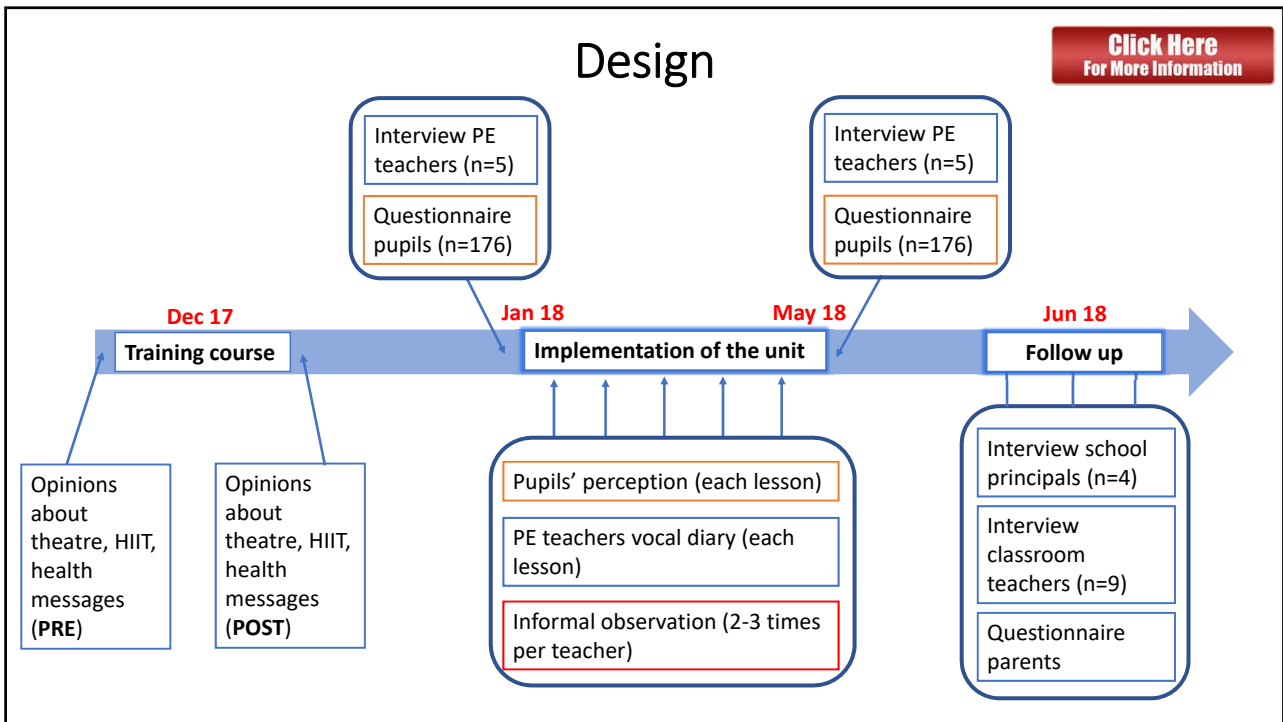
- Lesson Plan (left):** Titled 'Séance 9.10 - Préparation de séances et vidéo', it includes sections for 'Contexte', 'Objectifs', and 'Méthodes de l'enseignant'.
- HIIT Exercise Sheet (center):** Titled 'Fiche exercices HIIT et', it lists exercises categorized by body part: Membres supérieurs (e.g., Pompes sur genoux, Dips), Tronc (e.g., Gainage de twist, Mountain climber), and Membres inférieurs (e.g., Squat, Jump squat). It also includes instructions like 'Respecter le principe d'alternance' and 'Respecter les temps de repos! Minimum 30 secondes'.
- Video Creation Software (right):** A screenshot of 'Windows Movie Maker' with the text 'Créer une vidéo PAPS avec Windows Movie Maker' and a red arrow pointing to the 'Ajouter une vidéo' button.



“Oblomov: bouger, jouer, créer!”

DATA COLLECTING





PE teachers' perceptions at baseline

1. HIIT :

- ✓ Expected positive effects on physical fitness but question about pupils' motivation ?
- ✓ Confidence in their ability to implement the methodology
- ✓ Convinced of HIIT benefits in P.E.

2. Health messages :

- ✓ One of the biggest reason to join the project according to the current need for concrete actions related to health promotion in P.E.
- ✓ Most of them are convinced of their effectiveness beyond the P.E. lessons
- ✓ Related to P.E. curriculum evolution in the *Federation Wallonia-Brussels*

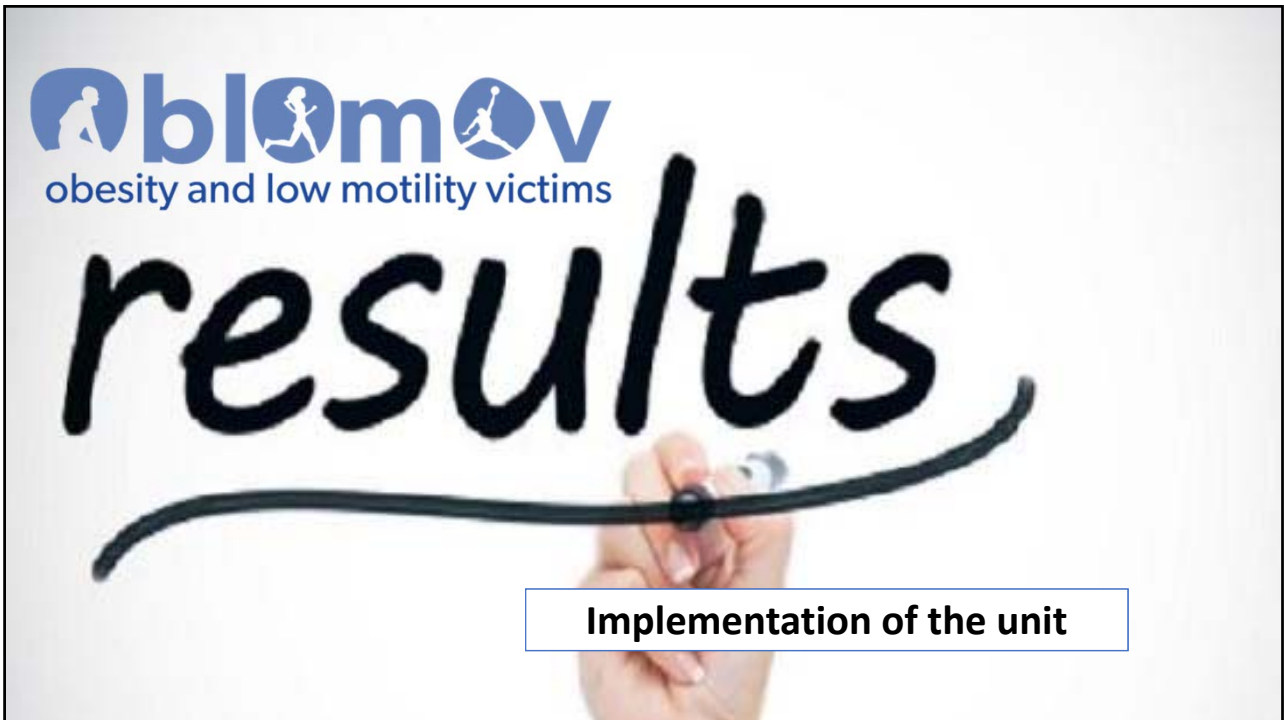
PE teachers' perceptions at baseline

3. Open scenario:

- ✓ Unusual approach for this age group : PETs are used and trained to teach common sports
- ✓ Usual approach for younger children than 5-6th graders

4. ObLoMoV project in general :

- ✓ Innovative, creative and interesting method
- ✓ Concerns about children's thoughts
- ✓ Concerns about own capacity to dramatize during P.E. lessons














































































































































Participants



| | | | | | | |
|--------------|-----|-----|----|----|-----------|--------------|
| Esneux | P5 | 17 | 11 | 6 | Classe #1 | Directeur #1 |
| Esneux | P6 | 24 | 15 | 9 | Classe #2 | |
| Tilff-Centre | P5 | 19 | 6 | 13 | Classe #3 | Directeur #2 |
| Tilff-Centre | P6 | 16 | 6 | 10 | Classe #4 | |
| Tilff-Hony | P5 | 7 | 4 | 3 | Classe #5 | |
| Tilff-Hony | P6 | 12 | 7 | 5 | | |
| Monfort | P5 | 15 | 9 | 6 | Classe #6 | Directeur #3 |
| Monfort | P6 | 17 | 9 | 8 | | |
| Verlaine | P6a | 24 | 6 | 18 | Classe #7 | Directeur #4 |
| Verlaine | P6b | 25 | 8 | 17 | Classe #8 | |
| | | 176 | 81 | 95 | | |


Collected data

| | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Lesson 7 | Lesson 8 | Lesson 9 | Lesson 10 | | |
|------------|---|---|---|---|---|--|---|---|---|---|---|---|
| Class 1 |   |   |   |   |   |   |   |   |   | | |  |
| Class 2 |   |   |   |   |   |   |   |   |   | | | |
| Class 3 |   |   |   |   |   |   |   |   | | |  | |
| Class 4 |   |   |   |   |   |   |   |   | | |  | |
| Class 5 |   |   |   |   |   |   |   |   |  | |  | |
| Class 6-T3 |   |  |  |  |   | | |  | |  | | |
| Class 6-T4 |   |  |  |  |   |  |  |   | |  | | |
| Class 7 |   |   |   |   |   |   |   | | | | | |
| Class 8 |   |   |   |   |   |   |   | | |  | | |

 : Diary

 : Video tapes

 : Post-it

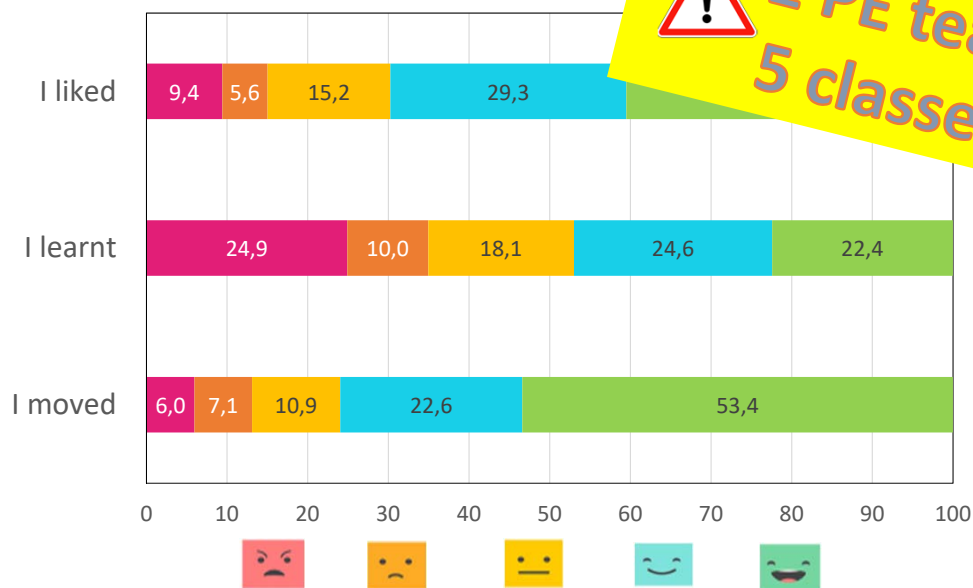
 : Pupils lesson's perceptions

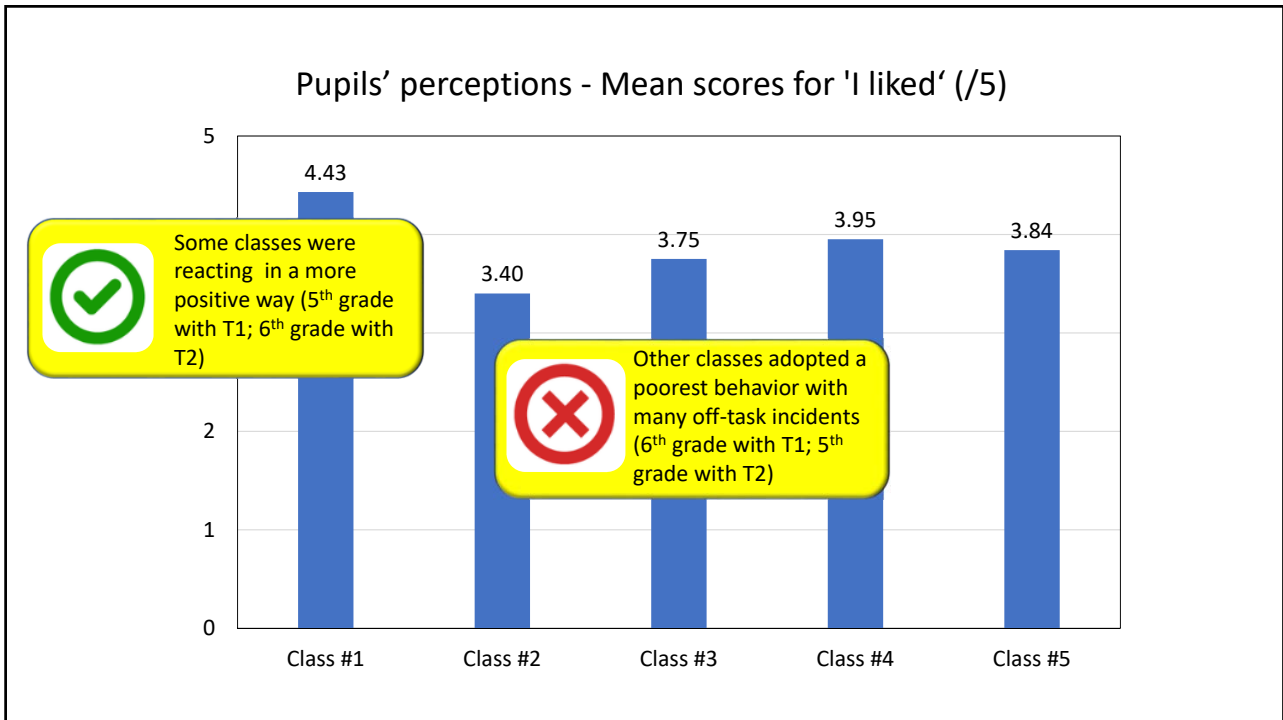
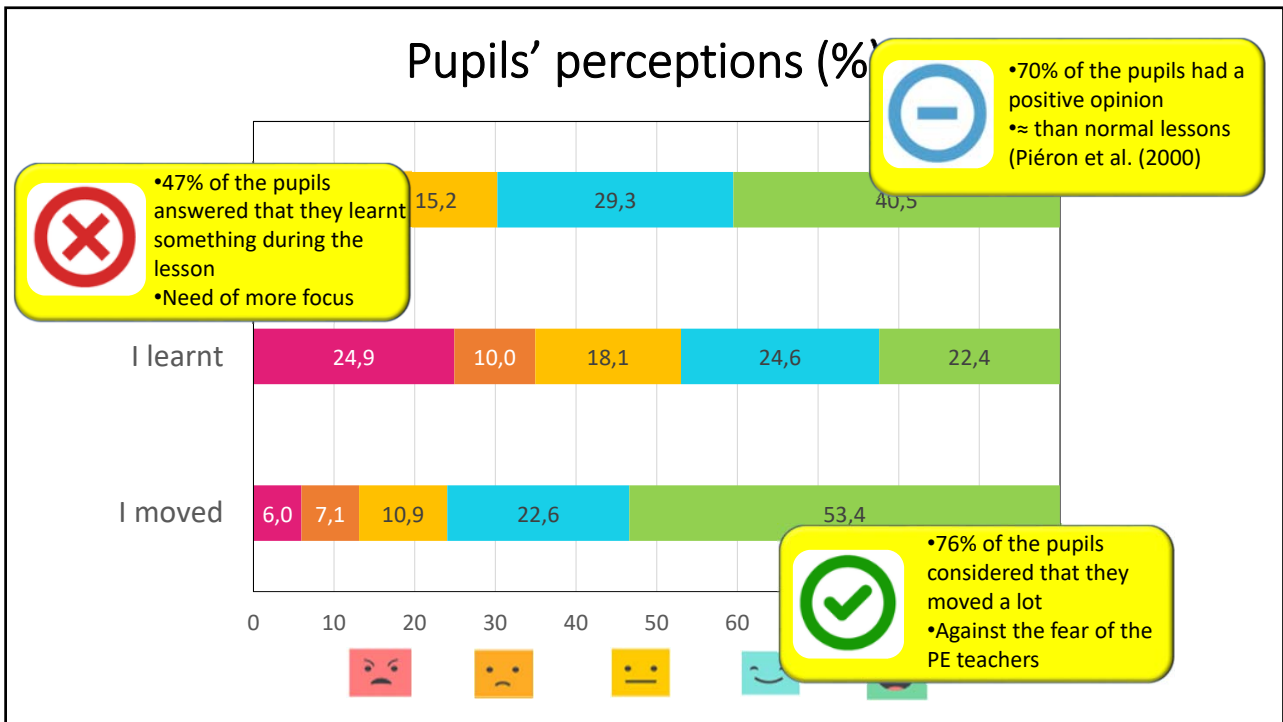
Update of the data processing

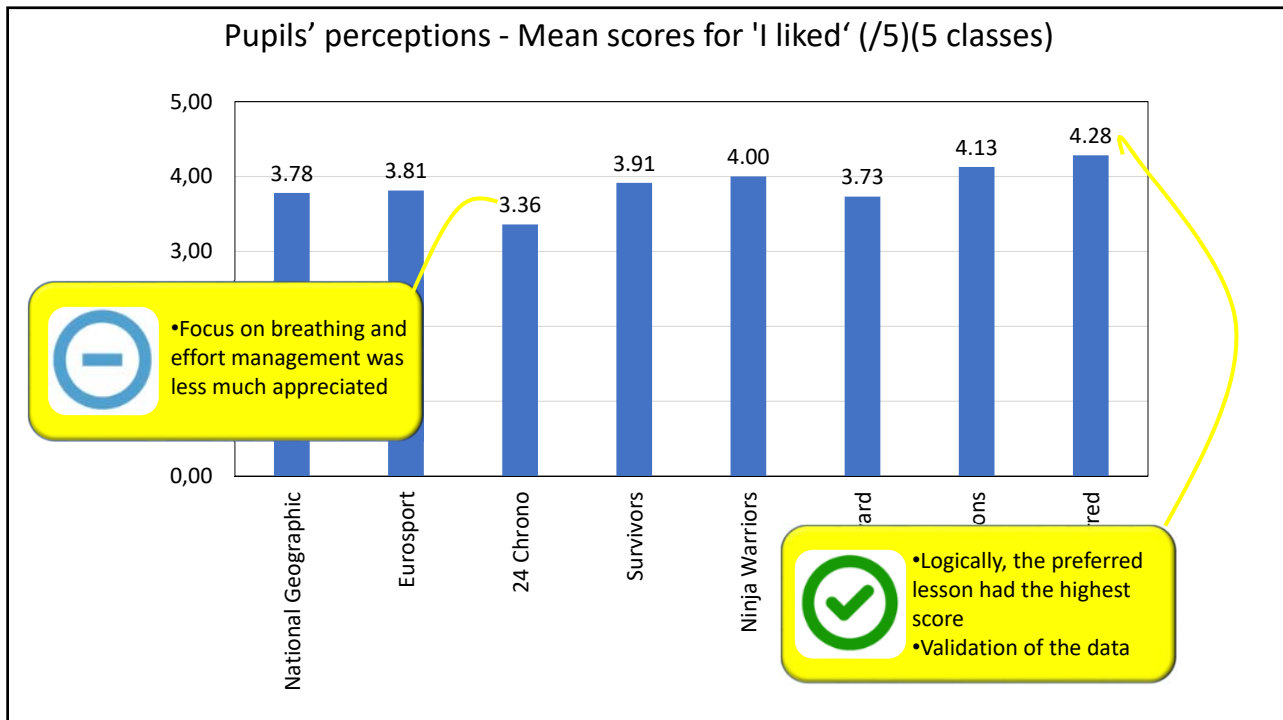
| | Pupils questionnaire pre-cycle | Post-it | Pupils lesson's perceptions | Pupils questionnaire post-cycle | Parents | PE teachers pre-cycle | Audio diary | PE teachers post-cycle | Principal post-cycle | Classroom teacher post-cycle |
|------------|--------------------------------|---------|-----------------------------|---------------------------------|---------|-----------------------|-------------|------------------------|----------------------|------------------------------|
| Class 1 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 |
| Class 2 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 |
| Class 3 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 |
| Class 4 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 |
| Class 5 | 👍 | 👍 | 👍 | 👍 | 👎 | 👍 | 👍 | 👍 | 👍 | 👍 |
| Class 6-T3 | 👍 | 👎 | 👎 | 👍 | 👎 | 👍 | 👍 | 👍 | 👍 | 👍 |
| Class 6-T4 | 👍 | 👎 | 👎 | 👍 | 👎 | 👍 | 👍 | 👍 | 👍 | 👍 |
| Class 7 | 👍 | 👍 | 👎 | 👎 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 |
| Class 8 | 👍 | 👍 | 👎 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 | 👍 |

→ Coded and analyzed → Coded but not yet analyzed
 → Available but not coded → Not yet available

Pupils' perceptions







Pupils' good practices

6 classes
429 Post-it

| | Post-it | Pupils | n/pupil |
|----------|---------|--------|---------|
| Class #1 | 111 | 105 | 1,1 |
| Class #2 | 67 | 146 | 0,5 |
| Class #3 | 20 | 126 | 0,2 |
| Class #4 | 26 | 119 | 0,2 |
| Class #7 | 83 | 138 | 0,6 |
| Class #8 | 122 | 142 | 0,9 |
| Total | 429 | 776 | 0,6 |

Class #1

Hydratation

Class #2

Physical activity

Class #7

Breathing/Effort

Class #1

Nutrition

Class #1

Class #7

Back protection

Sleep

Class #2

Class #2

Sedentary behaviours

PE teachers' audio diaries

Audio diaries



| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------|---|---|---|---|---|---|---|---|
| Class 1 | | | | | | | | |
| Class 2 | | | | | | | | |
| Class 3 | | | | | | | | |
| Class 4 | | | | | | | | |
| Class 5 | | | | | | | | |
| Class 6-T3 | | | | | | | | |
| Class 6-T4 | | | | | | | | |
| Class 7 | | | | | | | | |
| Class 8 | | | | | | | | |


"I did less dramatization because I'm not easy with that"

"Students less liked the questionnaires during the periods of recovery"

"I did less dramatization because I'm not easy with that"

"The kids were less interested in The Simpson"

Audio diaries



| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---------|---|---|---|---|---|---|---|---|---|----|
| | | | | | | | | | | |
| | | | | | | | | | | |
| Class 3 | | | | | | | | | | |
| Class 4 | | | | | | | | | | |
| Class 5 | | | | | | | | | | |
| Class 7 | | | | | | | | | | |
| Class 8 | | | | | | | | | | |

"The children adhered very quickly to the open scenario"

"There is progress in hydration. Children have understood its importance"

« It was very dynamic. The kids invented shouts of teams »

"Questionnaires « sports quiz » were adapted to children"

"The lesson was very well. The children remembered the different health topics"

Audio diaries

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------|---|---|---|---|---|---|---|---|---|----|
| Class 1 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 |
| Class 2 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 |
| Class 3 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 |
| Class 4 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 |
| Class 5 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 |
| Class 6-T3 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 |
| Class 6-T4 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 |
| Class 7 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 |
| Class 8 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 | 🎤 |

"I kept the context but I added a racket and a badminton shuttlecock"

"I changed the open scenario. I created the context « Karate Kid » because I felt better"

« I created 2 teams. I did exercises closer to the TV show »

What are Project Deliverables ?

Deliverable = Something Produced or Provided as a result of a process.

Input

Process

Output

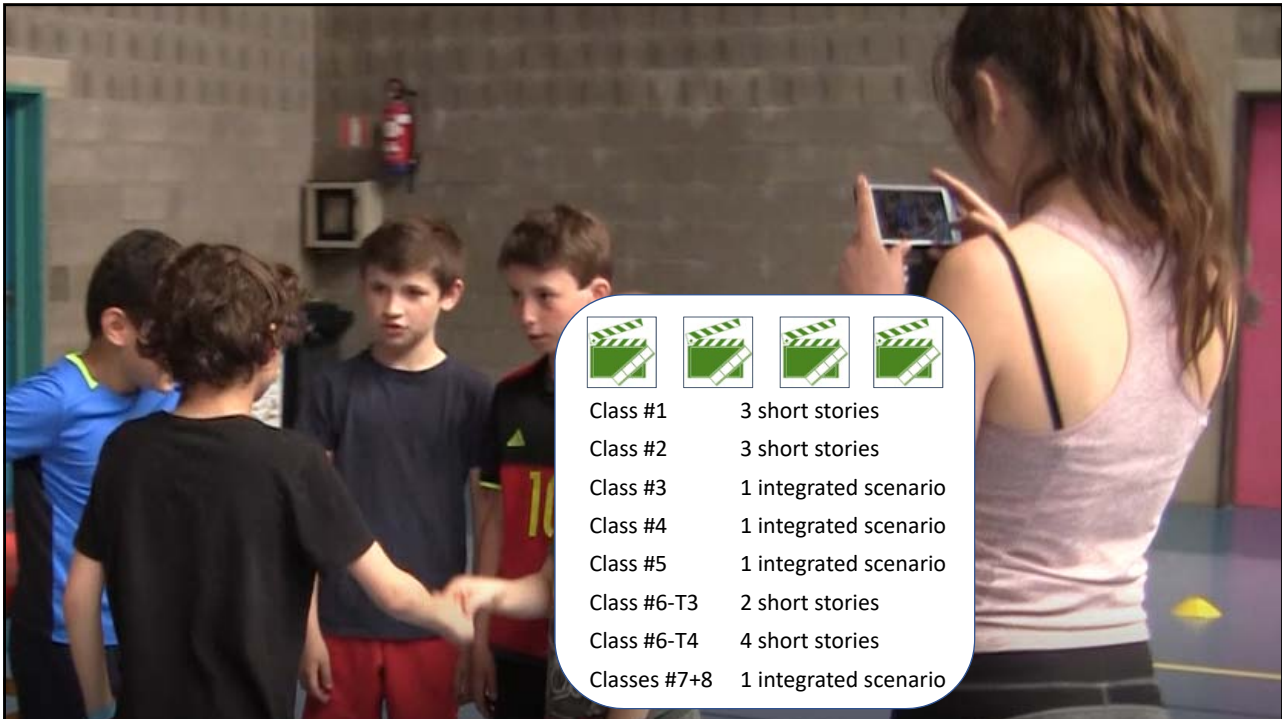
Input: Information, Documents, Plan, Equipment, Money, Software

Output: Consultation, Project Plan, Tool, App, Hardware, Test results, Contract

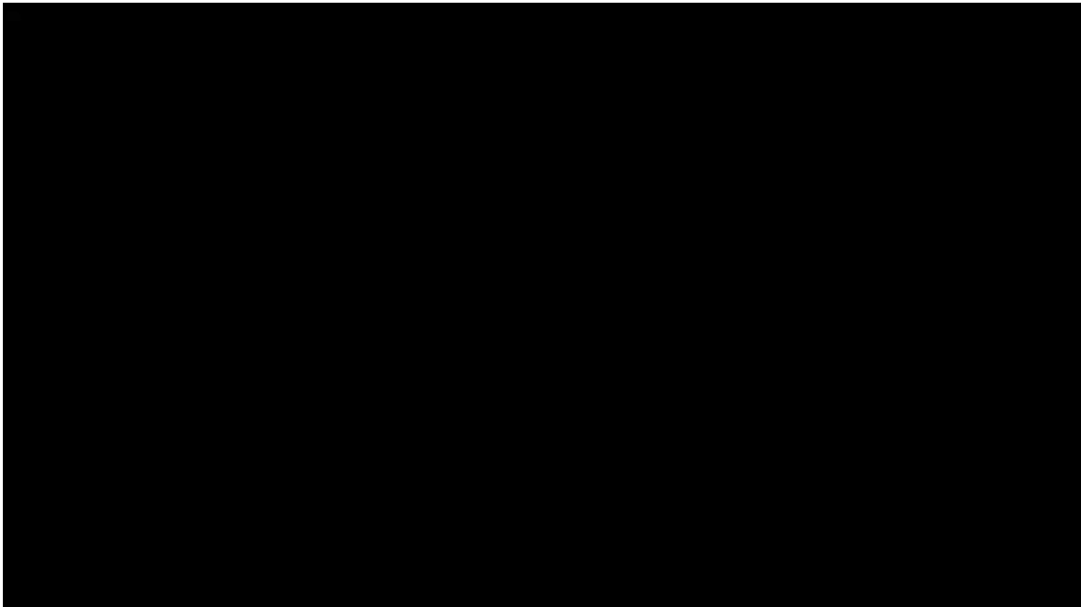
Project

- Project LifeCycle
 - Project Management Deliverables
 - Project Plan
 - ...
 - Product LifeCycle
 - Product Deliverables
 - Hardware
 - Software
 - App
 - Contract
 - Assessment Results

Due Dates (Milestones).
 ... outcome.
 ... online software tool. Simplify!



Pupils' scenarios : A example of short story – *Le tour du monde*





SWOT analysis

S
STRENGTHS

- Name of the project
- School principals' interest and satisfaction
- Support for the schools' organization
- Pupils' behaviour and interest in some schools
- PE teachers' interest in some schools
- Overall interest about health topics
- Gamelike approach appreciated by the pupils
- Selection of the scenarios focusing on TV series
- Enthusiasm of the pupils for the final sequences conceptions
- Quality of the final video sequences

SWOT analysis

W WEAKNESSES

- Drop out of 2 PE teachers out of 7 after the seminar (sport oriented)
- Repetition of many conditioning exercises
- Parents' attitude concerning respect of children's image
- Lack of motor engaged time (???)
- Short duration of the project for concrete effects on lifestyle
- Decrease of some PE teachers' motivation for open scenario
- Modification of the planning due to field reality
- Lack of permanent support of the PE teachers
- Lack of imagination of some PE teachers (need of more preparation)
- Scenarios considered as for young children by 6th graders

SWOT analysis

O OPPORTUNITIES

- Long term follow up on lifestyle
- Collecting and sharing of good practices
- Enrichment of the scenarios
- Development of a video data bank
- Interest of additional principals/PE teachers
- Proposals of improvement by PE teachers
- Availability of human resources for the follow up
- Additional preparation for PE teachers on open scenarios
- Use of the approach with younger pupils
- Transfer of the scenarios in other classes by the PE teachers
- New scenarios for adolescents
- Collaboration between PE teachers and classroom teachers

SWOT analysis

T

THREATS

- Resistance to change of some PE teachers
- Lack of financial support for sustainability
- Time requested for the video preparation
- Lack of effectiveness pointed out by the data

CONCLUSION


obesity and low motility victims

“Oblomov: bouger, jouer, créer!”

PAMIA

2017, *Retos*, 31, 245-251

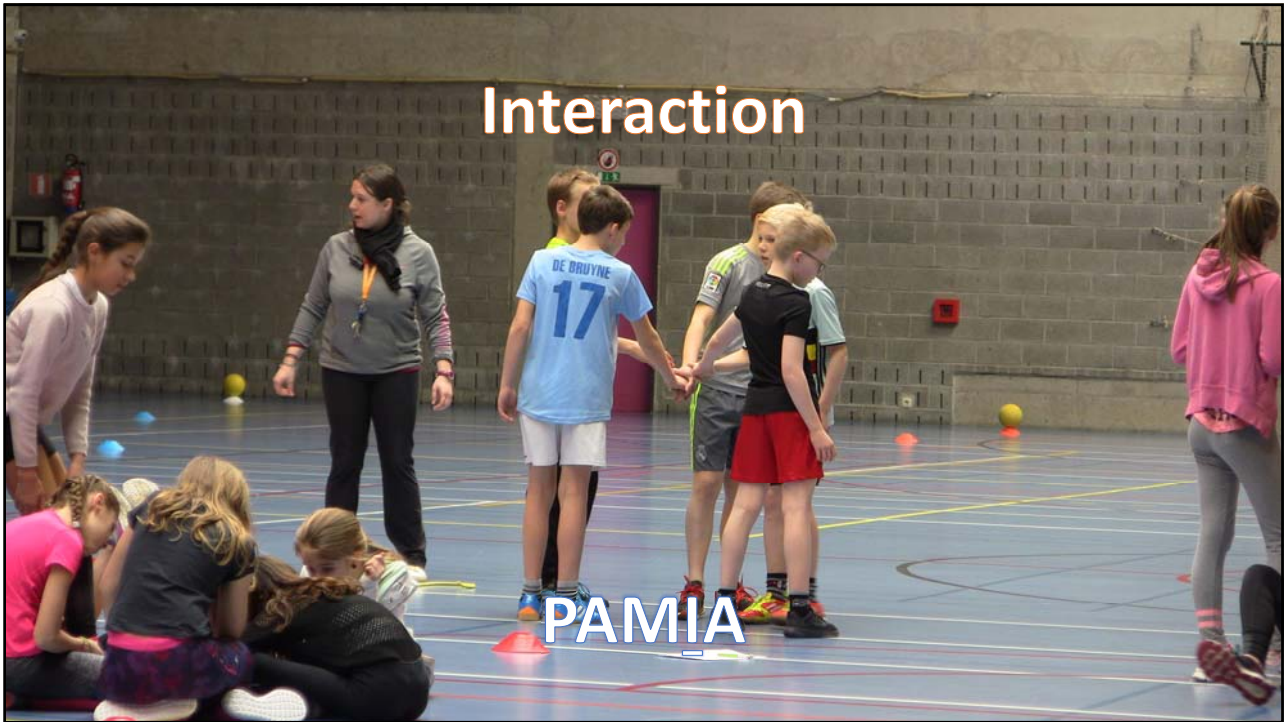
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Preparing physically educated citizens in physical education. Expectations and practices Preparar ciudadanos físicamente bien educados en Educación Física. Expectativas y prácticas

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Future implications

- **Adapted Physical Activity (grassroots sport!) :**
 - ✓ Implement the ObLoMoV methodology to overweight and obese children followed by the Liège University Hospital
 - ✓ Specific physical activity programme developed by the SIGAPS-ULiege
 - ✓ Three Saturday afternoons in 2018-2019



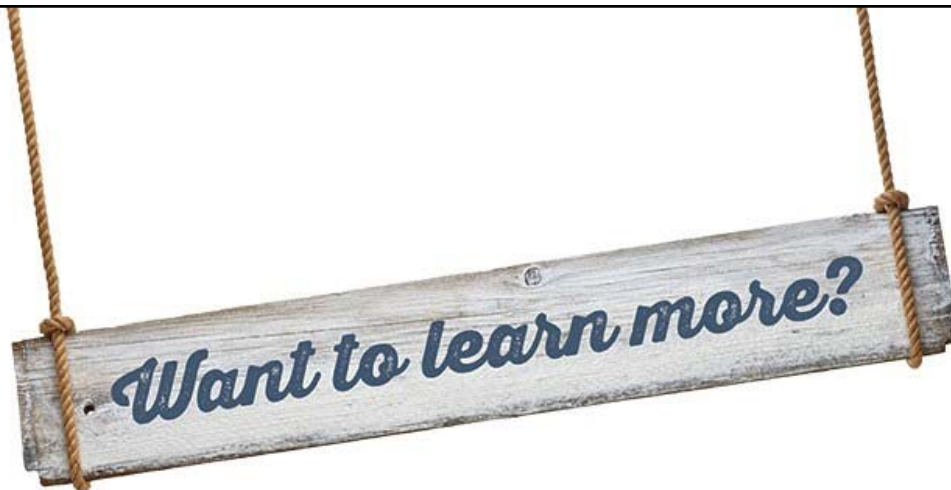
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Instruments used during the implementation – PE Teachers

- **Interview PE teachers (pre) :**
 - ✓ Expectations
 - ✓ Fears
 - ✓ Motivations
 - ✓ Organization

- **Vocal diaries (each lesson) :**
 - ✓ Adaptations
 - ✓ Attendance

- **Interview PE teachers (post) :**
 - ✓ Satisfaction, enjoyment
 - ✓ SWOT analysis
 - ✓ Opinions about HIIT, health messages, theatre
 - ✓ Effects and consequences



Instruments used during the implementation - Pupils

- **Questionnaire pupils (pre) :**
 - ✓ Physical activity level assessment (IPAQ)
 - ✓ Emotion management
 - ✓ Dietary habits
 - ✓ Health knowledge

- **Pupils' perceptions (each lesson) :**
 - ✓ Energy expenditure
 - ✓ Fun, entertainment
 - ✓ Learning

- **Questionnaire pupils (post) :**
 - ✓ Physical activity level assessment (IPAQ)
 - ✓ Emotion management
 - ✓ Dietary habits
 - ✓ Health knowledge
 - ✓ Changes in health habits during the unit



Instruments used during the implementation – Other actors

- **Interview school principals and classroom teachers :**
 - ✓ Difficulties
 - ✓ Opinions
 - ✓ Changes in pupils' behaviour and attitudes
 - ✓ SWOT analysis



- **Questionnaire parents :**
 - ✓ Knowledge about the project
 - ✓ Impact of the project at home
 - ✓ Opportunities of practice

