Foster knowledge and integration of healthy behaviors among Belgian pupils: impact of the Oblomov methodology

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Introduction - Oblomov project

https://www.oblomovproject.eu/

I do believe in movement! I do, I do!
Introduction - Oblomov project

Well-known novel written by Ivan A. Gončarov

- Oblomov = nobleman who is unable to undertake any action
- Oblomov is a symbol of procrastination and laziness
- Related to inactive lifestyle and the dissemination of the overweight and obesity epidemic
Goals of the project

1. Promoting an active and healthy lifestyle among pre-adolescents (11-13 years-old)
2. Developing autonomy, creativity, and cooperation
3. Using new technologies
4. Involving youths’ entourage (parents, family, school, associations)
5. Producing resources for sustainable changes

General and specific principles

- General principles
- Pen scenario heater
- High intensity interval raining

(Piccolo Teatro di Milano, Italy)
General and specific principles

1. HIIT = at least as efficient as moderate intensity endurance training (MIT) and... *(Eddolls et al., 2017)*

   1. Time-efficient
   2. Shorter distances and duration
   3. Obese/sedentary kids can participate with others
   4. Natural children’s movements are mostly intermittent
   5. Less boring and funnier

   *(Vitale, 2018; Bailey et al., 1995; Milanovic et al., 2015)*

2. Imaginary context of the exercises/lessons = motivation to be physically active... *(Pasetti, 2018)*

   1. Complete transformation of an ordinary lesson by the imaginary context
   2. Imagination = fun and engagement factor
   3. Distracts from the strenuousness of the effort
   4. Makes possible to repeat exercises without realising it

   *(Brougère, 2010; De Sousa Morgado & Jidovtseff, 2017; Terré, 2015)*
**Purposes of this study**

1. To analyse the impact on pupils of a 10 lessons-unit applying Oblomov’s principles:
   - Effects on pupil’s health knowledge?
   - Quality of the video productions?

2. To determine how the Oblomov-unit is able to encourage pupils to adopt an active lifestyle:
   - Effects of health good practices proposed by the pupils?
   - Parent’s involvement in the project

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**Methodology – Design**

- **Dec 17**
  - Training course
  - Opinions about theatre, HIIT, health messages (PRE)

- **Jan 18**
  - Implementation of the unit
  - Pupils’ perception (each lesson)
  - Pupils’ health good practices (each lesson)
  - Informal observation (2-3 times per teacher)

- **May 18**
  - Follow up
  - Interview PE teachers (n=5)
  - Questionnaire pupils (n=176)

- **Jun 18**
  - Interview school principals (n=4)
  - Interview classroom teachers (n=9)
  - Questionnaire parents
### Methodology – Overview of the approach

**Scenario:** Caught by their TV, children are going to travel from one TV show to another.

**HIIT:** ✓ Progressive increase of the effort duration (20 to 45s)
✓ Variety (exercises, objectives, muscles involved)

**Health:** ✓ Interactive and playful activities (Quiz, true or false, brainstorming,...)
✓ Transfers towards the house thanks to health good practices *(accountability)*

### Methodology - Health education activities

**Quiz on back ergonomics (10 questions)**
At the sport hall, when I have to carry a bench with a friend ...
A. ... I lean forward to grab it and straight up to lift it.
B. ... I raise it without thinking.
C. ... I bend my legs to grab him and hold him to lift him.

**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

**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

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<table>
<thead>
<tr>
<th>Scenario</th>
<th>National Geographic</th>
<th>Eurosport and The Olympic Games</th>
<th>24 Survivors</th>
<th>Ninja Warrior</th>
<th>Fort Boyard</th>
<th>The Simpsons</th>
<th>Favorite lesson</th>
<th>Video</th>
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<tbody>
<tr>
<td>L1</td>
<td>L2</td>
<td>L3</td>
<td>L4</td>
<td>L5</td>
<td>L6</td>
<td>L7</td>
<td>L8</td>
<td>L9-L10</td>
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<table>
<thead>
<tr>
<th>HIIT Protocol</th>
<th>10 x 20s Rest = 90sec (Ratio 1 : 4)</th>
<th>10 x 20s Rest = 90sec (Ratio 1 : 4)</th>
<th>10 x 30s Rest = 90sec (Ratio 1 : 3)</th>
<th>10 x 30s Rest = 90sec (Ratio 1 : 3)</th>
<th>10 x 40s Rest = 90s (Ratio 1 : 2)</th>
<th>10 x 40s Rest = 90s (Ratio 1 : 2)</th>
<th>10 x 45s Rest = 90s (Ratio 1 : 2)</th>
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<table>
<thead>
<tr>
<th>Health Topic</th>
<th>Hydration</th>
<th>Physical Activity</th>
<th>Breathing and Effort Management</th>
<th>Balance Food</th>
<th>Back Ergonomics</th>
<th>Sleep</th>
<th>Sedentariness and inactivity</th>
<th>General knowledge about sport</th>
<th>Video</th>
</tr>
</thead>
</table>
Methodology - Health education activities

At the beginning of the lessons, pupils are invited to write good practices about previous health activities.

Methodology – Video production

- Groups of 4-5 pupils
- Creation of a scenario
- 5 minutes & 3 exercises
- A short story or an integrated scenario
- Video prepared by the teacher
Results

Health knowledge

- Positive influence on children's health knowledge (3.22 Vs 4.37; p-value<0.000)
- Significant improvement 🎉
  **BUT** also significant deficiencies!
- Underlines the need of actions to improve pupil's health knowledge
- Health education was not Oblomov primary goal
  No teaching, no lessons ➔ games, quiz, playful activities

<table>
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<tr>
<th></th>
<th>T0</th>
<th>T1</th>
<th>p-value</th>
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<td>Health knowledge</td>
<td>3.22</td>
<td>4.37</td>
<td>&lt;0.000</td>
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1. PE = effective tool
2. PE & PE teacher: role to play in health education
3. // PE Curriculum reform in Federation Wallonia-Brussels
Health good practices – During the unit

<table>
<thead>
<tr>
<th>Class</th>
<th>Hydration</th>
<th>Physical activity</th>
<th>Relaxation &amp; breathing</th>
<th>Eating</th>
<th>Back ergonomics</th>
<th>Sleep</th>
<th>Sedentary lifestyle</th>
<th>Overall</th>
<th>Number</th>
<th>GP/pupils</th>
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<tr>
<td>C1</td>
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<td>21</td>
<td>10</td>
<td>21</td>
<td>7</td>
<td>6</td>
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<td>91</td>
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<tr>
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<td>51</td>
<td>57</td>
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<td>55</td>
<td>6</td>
<td>423</td>
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</tbody>
</table>

- Link theory-practice = necessary in health promotion at school (Poland et al., 2010)
- Accountability = PE teacher’s responsibility to produce concrete changes for pupils (Clements, 2013)
- « Societal transfer » (Cloes, 2010); « Transfer » (Hellison, 1995)

Health good practices – After the unit

<table>
<thead>
<tr>
<th>Hydration</th>
<th>113</th>
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<tbody>
<tr>
<td>Physical activity</td>
<td>55</td>
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<tr>
<td>Breathing - emotions management</td>
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<tr>
<td>Food</td>
<td>62</td>
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<tr>
<td>Back ergonomics</td>
<td>54</td>
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<tr>
<td>Sleep</td>
<td>58</td>
</tr>
<tr>
<td>Sedentary behaviors</td>
<td>62</td>
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</table>

Overall 445 good practices
Health good practices - Hydration

- "I try to drink more everyday" - E111, C7
- "I drink water after sport" - E2, C1
- "Now, I drink more water than syrup" - E2, C1
- "I don't take soda cans anymore" - E3, C1

Health good practices – Physical activity

- "I play outside and ride my bike with my friends in the neighborhood" - E96, C6
- "I joined a taekwondo club" - E88, C5
- "I realised a track & field internship" - E87, C5
Health good practices - Breathing

« I know how to calm down when I feel anxious » - E113, C7
« I have learned how to breathe when I run » - E129, C7
« I take 1 min. to control my breathing after an effort » - E77, C5

Health good practices - Food

« I take one fruit everyday instead of candies » - E111, C7
« I frequently avoid sugar in the morning now » - E5, C1
« I have not eaten crisps and groceries since Monday » - E129, C7
Health good practices – Back ergonomics

- "I pay attention no to curve my back" - E13, C1
- "I use my legs to carry something heavy" - E27, C2
- "I only take what I really need at school" - E169, C8
- "I removed my heavy books" - E170, C8

Health good practices – Sleep

- "I go to bed 30 minutes earlier everyday" - E13, C1
- "I don’t look at my mobile phone before going to bed" - E3, C1
- "Less lights in my bedroom" - E40, C2
Conclusion

« Less lights in my bedroom » - E40, C2

Pleasure
Achievement
Movement
Interaction
Autonomy

PAMIA (Cloes, 2017)

Health education activities
Health good practices sharing
Next steps

- **Curriculum adaptation in Wallonia:***
  - PE teachers will have to raise children awareness about *food, nutrition and impact of addictions*
  - ObLoMoV methodology should be integrated among tools proposed to the teachers

- **To be effective:**
  1. PE Teacher engagement
  2. Collaboration with the parents

   Enables concrete adaptations of lifestyle and increases accountability

   *Parents’ engagement = necessary to promote health at school*  
   
   (Lewallen et al., 2014)