Physical activity, emotional intelligence and food habits of Belgian pupils: effects of the Oblomov methodology

FRANCK, Nicolas, MOUTON, Alexandre, REMACLE, Maurine & CLOES, Marc

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Introduction

- Belgium: only 2% of the 6-9 years reach PA recommendations! (Wijtzes et al., 2016)

- PE: effective tool to encourage pupils to adopt a physically active lifestyle... (McLennan & Thompson, 2015)
  ... BUT doubt exists regarding the link between PE and PA. (Green, 2014)

- Multiple reasons:
  - Activities in PE: task automation, drills, matches (Boudreau, 2014)
  - Psycho-physical difficulties for sedentary pupils (embarrassment, self-esteem,...) (Vitale, 2018)
  - Performance goals and feeling of incompetence (Williams & Gill, 1995)
  - Physical conditioning: direct instruction (Vitale, 2018)
What is Oblomov?

- ObLoMoV = original approach ➡️ motivating pupils to move:
  - HIIT
  - Dramatization and imaginary context

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)
Origin of the Oblomov approach

3 scenarios (Sleeping Beauty, Pirates of the Caribbean, Harry Potter)
- 2h/week
- 10 weeks
- Performance at the end

1 scenario (popular TV shows in Belgium)
- 1h effective/week
- 10 weeks
- Video creation by the pupils

Practitioners’ comments
Theatre expert

Purposes of this study

1. To analyse the impact on pupils of a 10 lessons-unit applying Oblomov’s principles:
- Effects on pupil’s physical activity?
- Effects on pupil’s emotional intelligence?
- Effects on pupil’s food habits?
- Effects on pupil’s health knowledge?

2. To propose improvement opportunities from the participants’ perspectives in order to increase the effectiveness of the approach
Methodology - Participants

<table>
<thead>
<tr>
<th>Class</th>
<th>School</th>
<th>Year</th>
<th>Pupils</th>
<th>Girls</th>
<th>Boys</th>
<th>Principals</th>
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<tbody>
<tr>
<td>C1</td>
<td>A</td>
<td>P5</td>
<td>17</td>
<td>11</td>
<td>6</td>
<td>P1</td>
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<tr>
<td>C2</td>
<td>A</td>
<td>P6</td>
<td>24</td>
<td>15</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>B</td>
<td>P5</td>
<td>19</td>
<td>6</td>
<td>13</td>
<td>P2</td>
</tr>
<tr>
<td>C4</td>
<td>B</td>
<td>P6</td>
<td>16</td>
<td>6</td>
<td>10</td>
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</tr>
<tr>
<td>C5</td>
<td>C</td>
<td>P5</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>C6</td>
<td>D</td>
<td>P5</td>
<td>15</td>
<td>9</td>
<td>6</td>
<td>P3</td>
</tr>
<tr>
<td>C7</td>
<td>E</td>
<td>P6a</td>
<td>24</td>
<td>6</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>C8</td>
<td>E</td>
<td>P6b</td>
<td>25</td>
<td>8</td>
<td>17</td>
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</table>

1. 5 schools nearby Liege
2. 8 classes (80 Oblomov lessons)
3. 176 pupils took part in the project
4. Majority of boys (95>81)
5. 5 PE teachers trained to the Oblomov pedagogy

Methodology – Overview of the approach

- **Open scenario**: National Geographic and the Olympic Games
- **HIIT Protocol**
  - 10 x 20s Rest = 90sec (Ratio 1:4)
  - 10 x 30s Rest = 90sec (Ratio 1:3)
  - 10 x 40s Rest = 90s (Ratio 1:2)
  - 10 x 45s Rest = 90s (Ratio 1:2)

- **Health Topic**
  - Hydration
  - Physical Activity
  - Breathing and Effort Management
  - Balance Food

1. **Scenario**: Caught by their TV, children are going to travel from one TV show to another
2. **HIIT**:
   - Progressive increase of the effort duration (20 to 45s)
   - Variety (exercises, objectives, muscles involved)
3. **Health**:
   - Interactive and playful activities (Quiz, true or false, brainstorming,...)
   - Transfers towards the house thanks to health good practices (accountability)

Video
Methodology – Video creation

Methodology – Design

Dec 17
Training course

Opinions about theatre, HIIT, health messages (PRE)

Opinions about theatre, HIIT, health messages (POST)

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

Interview PE teachers (n=5)

Questionnaire pupils (n=176)

Interview PE teachers (n=5)

Questionnaire pupils (n=176)

Jun 18
Follow up

Interview school principals (n=4)

Interview classroom teachers (n=9)

Questionnaire parents
Methodology – Questionnaire pupils

1. Physical activity
   - PAQ-C  (Kowalski et al., 2004)
   - Self-reported PA
   - Last 7 days

2. Emotional intelligence
   - TEIQue-ASF  (Petrides, 2009)
   - Emotions management
   - 30 items

3. Food habits
   - Adolescent Food Habits Checklist (AFHC)  (Johnson et al., 2002)
   - 23 items

4. Health knowledge
   - 10 questions
   - Related to Oblomov’s health topic

Results
Results & discussion

<table>
<thead>
<tr>
<th></th>
<th>T0</th>
<th>T1</th>
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</tr>
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<tbody>
<tr>
<td>PAQ-C</td>
<td>3.09</td>
<td>3.26</td>
<td>&lt;0.000</td>
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<tr>
<td>TEIQUE-ASF (/210)</td>
<td>143.61</td>
<td>144.15</td>
<td>0.77</td>
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<tr>
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<td>13.88</td>
<td>13.55</td>
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<tr>
<td>Health knowledge (/10)</td>
<td>3.22</td>
<td>4.37</td>
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Results & discussion – (1) Physical activity

- Positive influence on self-reported PA (3.09 Vs 3.26 ; p-value<0.000)
- Related to **pleasure perception** (Biddle et al., 1998; Carroll et al., 2001; Cavill et al., 2001)
Results & discussion – (1) Physical activity

- Influence of the weather? (Cuypers et al., 2016)

- Influence of the gender?

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<th>Girls</th>
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<tr>
<td>T0</td>
<td>3.21</td>
<td>2.96</td>
<td>0.0048</td>
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<tr>
<td>T1</td>
<td>3.31</td>
<td>3.21</td>
<td>0.311</td>
</tr>
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- Boys = more physically active than girls (Biddle et al., 2004; Van Mechelen et al., 2000; Vilhjalmsson et al., 2003)
- BUT Girls: bigger improvements after Oblomov lessons

Why?
- Oblomov = non-competitive & task-oriented approach
- Closer to girls’ motivational characteristics (Nicholls, 1984; Roberts & Walker, 2001)

Oblomov = approach which encourages girls to be more active?

Results & discussion – (1) Physical activity

- Major differences from one class to another

![Graph showing major differences from one class to another](image)

Negative evolutions (n=2)
Results & discussion

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“The ability to monitor one’s own and other people’s emotions, to discriminate between different emotions and label them appropriately, and to use emotional information to guide thinking and behaviour.”

(Salovey & Mayer, 1997, p.10)

- Literature showed HIIT in PE was able to improve EI & creativity
  (Ruiz-Arizo et al., 2018)
- Oblomov = focused on cooperation, fun & social interactions
- BUT : not able to induce improvements of EI
Results & discussion

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No influence on children’s food habits (13.88 Vs 13.55 ; p-value=0.24)

Major determinant = parents’ food habits → mother +++ (Vereecken et al., 2004)

BUT one predictive factor = children’s health knowledge (Yperman & Vermeersch, 1979)

BUT important issue on children’s food habits: intervention duration
10 weeks = too short to modify life habits
Health part of the Oblomov = one shot?

1. Long-term intervention on health issues
2. Cooperation with classroom teachers
3. Parents engagement
Results & discussion

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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

1. PE = effective tool
2. PE & PE teacher: role to play in health education
3. PE Curriculum reform in Federation Wallonia-Brussels
## Conclusion

### SWOT Analysis

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
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<tbody>
<tr>
<td>1. <em>Playful</em> approach</td>
<td>1. Lack of <em>variety</em> (exercises)</td>
</tr>
<tr>
<td>2. <em>Children’s</em> interest for <em>health</em> education activities</td>
<td>2. Lack of <em>parents’</em> engagement</td>
</tr>
<tr>
<td>3. <em>Scenarios</em> based on popular TV shows</td>
<td>3. <em>Length</em> of the unit</td>
</tr>
<tr>
<td>4. Original <em>video</em> production by the pupils</td>
<td>4. 6th grade: <em>scenarios</em> sometimes too <em>childish</em></td>
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<tr>
<td>5. Sharing of health <em>good practices</em></td>
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<th>Threats</th>
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<td>1. <em>Enrichment</em> of the <em>scenarios</em></td>
<td>1. <em>Sustainability</em> of the projet (<em>What remains of Oblomov in those classes?</em>)</td>
</tr>
<tr>
<td>2. Creation of <em>new scenarios</em> for some lessons (L3, L7)</td>
<td>2. <em>Abandonment</em> of health education activities (requires time and investment for the PE teacher)</td>
</tr>
<tr>
<td>3. Sharing of <em>video production</em></td>
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<td>4. Transfer to other classes</td>
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<tr>
<td>5. Collaboration with the <em>parents</em> (health-related activities)</td>
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- **Video Creation**
- **Scenarios**
- **Parents**