Organic food in Danish schools
-a contribution to healthier eating at school?

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Abstract

The European school food system is under transition in what has been called the European school food revolution by Morgan & Sonnino (2008). Two pillars play a major role in that transition. The call for healthier eating and the call for more organic food consumption. This research has been exploring how these two agendas interact. The research hypothesizes that there might be a synergistic interaction between the two. In other words if organic strategies and procurement schemes have the potential to be supportive for healthier eating among young people at school. The research was conducted using school food coordinators in public primary/secondary schools (children age from 6 to 15 years old) in Denmark, Germany, Finland and Italy as respondents for a web based questionnaire. The study was first carried out in Denmark, and subsequently performed in the other three countries. The questionnaire was translated and language and culture adapted. The questionnaire included questions on attitude, policies and serving practices regarding organic food strategies and actions supportive for healthy eating. Findings suggest that schools with organic supply tend to develop organisational environments that is more supportive for healthy eating than their non organic counterparts. However the results were only significant for Denmark and Italy. In Germany results were significant in some cases where as for Finland there were no differences or results were contradictory. The findings suggest the school food revolution is driven by different agendas but that awareness raising on nutrition and sustainability issues seems to be an important feature of organic change processes.
Aim of study
Research question

• What is the interplay between organic food policies and healthy eating strategies
Research object

Public primary/secondary schools
(children aged 6 – 15)

Respondent: School food coordinators

- Organic schools
- Non organic schools

*Independent variable*: Having an organic food procurement policy?
Why do we think there is a link between organic consumption and health behaviour?

• Health reasons are the one most important reason for consumers to buy organic. Torjusen et al (2004)

• Health reasons are more important than concerns for environment and nature. Beckmann (2002)

• Introduction of organic foods seems to induce a changed dietary pattern. O’Doherty et al (2001)

• Consumption of vegetables and cereals was higher among heavy-users (Brombacher & Hamm 1990)

• Green caterers serve more healthy meals than their non green counterparts. (Mikkelsen et al, 2007)
Study design
Web Based Questionnaire

- **Intention** (*what intend to do*)
- **Attitude** (*think or feel*)
- **Praxis** (*what are actually doing*)

Measurements
Indicators
Proxies for healthy eating

• Attitude with regard to promote organic among children
• Attitude with regard to promote healthy eating habit among children

• Having a Food and Nutrition Policy (FNP)
• Integrating nutrition in pedagogical activities
• Enforcing nutritional recommendations
• Meeting nutritional guidelines

• Availability of FV
• Availability of water
• Non availability of fizzy drinks
• Non availability of cocoa milk
### Sampling schools

Status of distribution and respondence of WBQ

<table>
<thead>
<tr>
<th></th>
<th>Denmark</th>
<th></th>
<th>Germany</th>
<th></th>
<th>Finland</th>
<th></th>
<th>Italy</th>
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<tbody>
<tr>
<td></td>
<td>Respondents</td>
<td>Percent</td>
<td>Respondents</td>
<td>Percent</td>
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<td>Percent</td>
<td>Respondents</td>
<td>Percent</td>
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<tr>
<td>Complete</td>
<td>79</td>
<td>44.1%</td>
<td>57</td>
<td>37.5%</td>
<td>205</td>
<td>20.5%</td>
<td>176</td>
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<td>7.3%</td>
<td>65</td>
<td>42.8%</td>
<td>45</td>
<td>4.5%</td>
<td>39</td>
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<td>No responding</td>
<td>87</td>
<td>48.6%</td>
<td>30</td>
<td>19.7%</td>
<td>748</td>
<td>74.9%</td>
<td>725</td>
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<tr>
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<td>179</td>
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<td>152</td>
<td>100.0%</td>
<td>998</td>
<td>100.0%</td>
<td>940</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Action Indicator 1:
Having a food and nutrition policy

<table>
<thead>
<tr>
<th>Country</th>
<th>Organic Schools</th>
<th>Non-Organic Schools</th>
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<tbody>
<tr>
<td>Denmark</td>
<td>80%</td>
<td>57%</td>
</tr>
<tr>
<td>Germany</td>
<td>71%</td>
<td>34%</td>
</tr>
<tr>
<td>Finland</td>
<td>86%</td>
<td>83%</td>
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<tr>
<td>Italy</td>
<td>85%</td>
<td>56%</td>
</tr>
</tbody>
</table>
Action Indicator 2: Integrating nutrition in curricula

- Denmark: 70% Organic, 35% Non-Organic
- Germany: 43% Organic, 16% Non-Organic
- Finland: 33% Organic, 32% Non-Organic
- Italy: 76% Organic, 51% Non-Organic
Action Indicator 3: Providing a school canteen

[Bar chart showing percentages of organic and non-organic schools in Denmark, Germany, Finland, and Italy.]

- Denmark: 70% organic, 30% non-organic
- Germany: 71% organic, 73% non-organic
- Finland: 88% organic, 97% non-organic
- Italy: 87% organic, 64% non-organic
Action Indicator 4:
Enforcing nutritional recommendations

- Denmark: Organic 50%, Non-organic 6%
- Germany: Organic 21%, Non-organic 32%
- Finland: Organic 80%, Non-organic 63%
- Italy: Organic 76%, Non-organic 51%
Future perspectives

• The pupils are at 5th - 6th grade (age 11-13) in the public primary schools in Denmark.

• Organic schools + non organic school

• Daily intake

• Dietary assessment tools
Why this link?

• Municipal council adopts and agenda 21 policy
• Municipal civil servants or politicians suggest an organic policy (POP)
• School head master told to implement POP
• School head master initiate a meeting on school food
• Discussions go on about the scope of school food
Why this link?

• Positive lists and negative food lists discussed
• Nutrition, food & health issues debated
• Organic food issues debated
• Organic foods implemented
• Forced menus redesign
• More vegetables, less meat

• Increased awareness
Conclusion

*Organic schools* seem to be better at creating *good nutritional environments* than *non-organic schools*.
Valid for all countries?

- 🇩🇰 🇮🇹 🇩🇪 In all cases
- 🇫🇮 In some cases
- 🇫🇮 No differences or contradictory

- **Limitations of study:**
  - *Size of sample is small*
  - *Drop out rate considerable and needs to be analyzed*
Why this link?

• Municipal civil servants write the operational procedures
• School head master receives a letter
• School head master initiate a meeting on school food
• Discussions go on about the shape of school food
• Positive lists and negative lists are discussed
Why this link?

• Municipal council adopts and agenda 21 policy
• Health issues debated
• Organic food issues debated
• Menus taken to redesign
• More vegetables, less meat
• Increased awareness
Recommendations
for policy makers and practitioners

• Previous studies shows:
  that consumers in most cases make a link between organic food and individual health

• This study shows:
• on the fact that organic supply associates with a healthier environment

• Consider a position on organic food in your food and nutrition policy
• Integrate organic supply with curricula activity - apply the whole school approach
• Integrate education for sustainability with education for healthy eating
• Theoretically based teaching should go hand in hand with hands on learning
Thank you!
Special thanks to
Chen He
Mia Brandhøj