The Impact of Energy Education on Low-Income Households: Evidence from a Field Experiment

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The Watt Watchers Program

Historically:
3 hour (2 X 1.5 hour) in-person class on low-cost energy behavior change.

Population:
Low-income households (below 200% of federal poverty level) from BGE territory in need of bill assistance (received a disconnection notice).

For the trial:
An online class (45 minutes), with similar content than the in-person class, also offered.
Experimental Design: Randomized Encouragement Design (RED)

Clients Applying for Bill Assistance

RANDOMIZATION

Control: No Class
- Don’t Attend: Compliers
- Attend: Non Compliers

Onsite Class
- Attend: Compliers
- Don’t Attend: Non Compliers

Online Class
- Attend: Compliers
- Don’t Attend: Non Compliers
Results I: Compliance

5,275 Clients

RANDOMIZATION

~1/3 Control: No Class
- Don’t Attend: 96%
- Attend: 4%

~1/3 Onsite Class
- Don’t Attend: 60%
- Attend: 40%

~1/3 Online Class
- Don’t Attend: 4%
- Attend: 96%

36% 64%
## Average Energy Savings

<table>
<thead>
<tr>
<th></th>
<th>Onsite</th>
<th>Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>14.7%**</td>
<td>14.4%*</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Electricity + Natural Gas</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

1-6 months after the class

<table>
<thead>
<tr>
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</tbody>
</table>

7-16 months after the class
Heterogeneous Effects

ITT: Electricity

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Onsite</th>
<th>Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>25th</td>
<td>1.5% N.S.</td>
<td>1.9% N.S.</td>
</tr>
<tr>
<td>50th</td>
<td>5.9%***</td>
<td>2.2% N.S.</td>
</tr>
<tr>
<td>75th</td>
<td>3.5%***</td>
<td>2.6% N.S.</td>
</tr>
</tbody>
</table>

kernel = epanechnikov, bandwidth = 2.6545
Thank you!

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