Improving Designs for Description

Y520
Strategies for Educational Inquiry

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Pre-experimental Designs for Description

■ Case study design
■ One-group, post-test only
■ One-group, pre-test / post-test design
■ Non-randomized comparison group, pre-test / post-test design
■ One-group time series design
How to improve: 

**Case study design**

Original Design:

```
“Treatment”     X     O_2
```

Improved Design:

Campbell & Stanley offer no way to improve this design. There is no basis for comparison and no way to ensure equivalence of groups that might be used in a comparison.

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How to improve: 

**One-Group, Post-Test Only Design**

Original Design:

```
Treatment       X     O_2
```

Improved Design:

```
Treatment       X     O_2
Control         O_2
```

Add control group. Random assignment of Ss to groups.
### How to improve: One-Group, Pre-Test / Post-Test Design

**Original Design:**

<table>
<thead>
<tr>
<th></th>
<th>O₁</th>
<th>X</th>
<th>O₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Improved Design:**

<table>
<thead>
<tr>
<th></th>
<th>O₁</th>
<th>X</th>
<th>O₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>O₁</td>
<td></td>
<td>O₂</td>
</tr>
</tbody>
</table>

Add control group. Random assignment of Ss to groups.

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### How to improve: Non-randomized comparison group, Pre-Test / Post-Test Design

**Original Design:**

<table>
<thead>
<tr>
<th></th>
<th>O₁</th>
<th>X</th>
<th>O₂</th>
</tr>
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<tbody>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Improved Design:**

As above, except random assignment of Ss to groups.
How to improve:
One-group time series design

Original Design:
O₁  O₂  O₃  O₄  O₅  X₁  O₆  O₇  O₈  O₉

Improved Design:
O₁  O₂  O₃  O₄  O₅  X₁  O₆  O₇  O₈  O₉
O₁  O₂  O₃  O₄  O₅  O₆  O₇  O₈  O₉

Add a control group and randomly assign subjects to groups.