Synthesis of multiple case study data through systematic, quantitatively based methods

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Challenges and Guidance for Theory Building from Cases

- **Why is inductive theory building** called for v. deductive theory testing? Clarify why the existing theory offers no plausible response. Offer insight into complex phenomena that quantitative analysis cannot.

- **Justification** - show importance of phenomena to theory, and/or practice, identify current gaps in existing theory and empirically based evidence. Research questions should be responsive to these gaps.

- **Theoretical v. Random Sampling** - purpose is to generate theory, not to test it. Sample cases are chosen for theoretically relevant reasons. Maximum variation or polar sampling on salient variables.

- **Validity?** Based on justification of theory provided from gap analysis of literature. Present a sound, theoretical framework.

- **Reliability?** Each case is viewed as a discrete experiment. Rigorous cross case analysis using Replication logic- convergence, or contrast? 80% + inter-rater reliability within and across case analyses.

Sources: Larsson, 1993; Creswell & Miller, 2002; Yin, 2003; Eisenhardt & Graebner, 2007.
Theoretical Framework

Sender: N=151, n= 6 cases
Maximum Variations Criteria

Message: Strengths of Institution

Channels: Interviews, Letters, Publications, Web

Feedback: Ranked in Top 1/3 of sample
% change in $ contributions Fiscal 2003-2005

Receiver: Donor

Source: Shannon-Weaver. (1948). Mathematical Model of Communication
Systematic Methodology

1. **Theoretically informed case selection, Maximum variation** (Patton, 1987) - public v. private type, enrollment size, and total giving dollars.

2. **Data analysis procedures** - within each case code, category and theme development, content analysis methodology (Neuendorf, 2001; Krippendorf, 2003).

3. **Data verification procedures** - triangulation from multiple data sources, member checking, inter-coder agreement (minimum 80%), external supervision and expert judges, full description of cases with audit trail.

4. **Synthesis of data across cases** (Eisenhardt, 2007; Stake, 2006) - using systematic, content analysis methodology (Neuendorf, 2001).

5. **Theory building through the development of conceptual models** - from synthesized cross-case data findings (Eisenhardt, 2007)
<table>
<thead>
<tr>
<th></th>
<th>% Change</th>
<th>Total $ raised</th>
<th>Type</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>615%</td>
<td>29,000,000</td>
<td>Public</td>
<td>18,000</td>
</tr>
<tr>
<td>2</td>
<td>433%</td>
<td>88,000,000</td>
<td>Public</td>
<td>21,000</td>
</tr>
<tr>
<td>3</td>
<td>363%</td>
<td>202,000,000</td>
<td>Public</td>
<td>27,000</td>
</tr>
<tr>
<td>4</td>
<td>450%</td>
<td>63,900,000</td>
<td>Private</td>
<td>11,000</td>
</tr>
<tr>
<td>5</td>
<td>380%</td>
<td>418,600,000</td>
<td>Private</td>
<td>33,000</td>
</tr>
<tr>
<td>6</td>
<td>377%</td>
<td>409,800,000</td>
<td>Private</td>
<td>10,000</td>
</tr>
</tbody>
</table>
Sequential Data Analysis Process

1) Data was read through to get a general sense of the material by primary and secondary researcher.

2) 56 codes were identified through collaboration by segmenting and labeling the text into descriptive categories. Sentences were the unit of analysis.

3) Coding was verified through an inter-coder agreement check (Miles & Huberman, 1984) with another experienced case researcher.

4) Verified codes were used to develop themes by aggregating similar codes or clusters (Stake, 2006) together.

5) Themes were analyzed across data sources, and then across case subjects, to surface 4 grand themes, with 13 sub-theme categories using a quantitative, strength of frequency count- (e.g., number of sentences) methodology.

6) Case study narrative was constructed to present case descriptions, themes, and findings.

Source: (Lincoln & Guba, 1994; Hatch, 2002; Creswell, 2003)
## Themes and Thematic Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Themes</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality of life</strong></td>
<td>World benefit, quality of life</td>
<td>243</td>
</tr>
<tr>
<td></td>
<td>Student development, quality of life</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td>Faculty development, quality of life</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>Regional, economic quality of life</td>
<td>91</td>
</tr>
<tr>
<td><strong>Strength success</strong></td>
<td>Stories of success demonstrated through outreach, voices of people</td>
<td>253</td>
</tr>
<tr>
<td><strong>stories with constituent testimonials</strong></td>
<td>Research story, descriptions of how it works</td>
<td>245</td>
</tr>
<tr>
<td></td>
<td>Strengths communicated in diverse messages</td>
<td>69</td>
</tr>
<tr>
<td><strong>Innovative, interdisciplinary solutions to big, complex problems</strong></td>
<td>Interdisciplinary, collaborative culture</td>
<td>281</td>
</tr>
<tr>
<td></td>
<td>Innovative programs solving complex problems</td>
<td>219</td>
</tr>
<tr>
<td></td>
<td>Collegial/positive work environment</td>
<td>55</td>
</tr>
<tr>
<td><strong>Credible, leading faculty or program</strong></td>
<td>Advancement, leadership in research and education</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>Enhancement of research or education</td>
<td>152</td>
</tr>
<tr>
<td></td>
<td>Quality of faculty or program, award</td>
<td>125</td>
</tr>
</tbody>
</table>
Inter-rater Reliability Procedure (Miles & Huberman, 1984)

1. Two researchers were trained in case study analysis methodology (Creswell, 2003).

2. Researchers open-coded the first case data, and discussed their coding to achieve understanding on the meaning of coding and theme terms. (Creswell, 1998)

3. For each case, a random sample of 20% of the data was coded independently. Next, coding was compared by the two researchers. Codes that agreed were counted in a total.

4. University two- 825 sentences coded. 20% = 165 in random sample. 140 sentences agreed, 84.8%.

5. Inter-rater agreement was 84.5% across all cases.
Model of communicating strengths for effective fundraising

Institutional Strengths
- Student development
- Quality of programs
- Innovation
- Interdisciplinary culture
- Quality of faculty

University

Strength Message Themes
- Quality of life
- Strength success stories with constituent testimonial
- Innovative, interdisciplinary solutions to big, complex problems
- Credible, leading faculty or program

Fundraising Appeal Message

Appeal Channels
- Letters
- Publications
- Web-based

$ Contributions

Donor
Delimitations and Limitations

- Confined to tier one research universities, may have limited generalizability.
- Strength of relationship between strength variables and funds raised not determined.
- Possible different interpretations by different readers.
- Possible researcher bias in analysis of findings.
“Thank you for making this day necessary”  Yogi Berra

Model of university-donor relationship

University
- honor, commemoration
- feeling of pride, loyalty
- donor centric or relevant
- donor relationship, listening
- recognition, gratitude

Donor

Ongoing relationship

Fundraising Appeal Message
Innovative, interdisciplinary solutions to big, complex problems

“You identify areas with strength and show how they are highly relevant to the world. For example, security and terrorism is a big deal in the world right now, and we are good at solving problems in those arenas. If one of the world’s big problems happens to fit with one of our capabilities our strengths, then a team will get together to work on the problem.”

University six
Implications for Practice

(1) Communication of strengths for fundraising effectiveness was confirmed.

(2) University strengths (quality of faculty) and relationship to constituent outcomes (quality of life) should be expressed in fundraising messages.

(3) Institutional strength themes may be utilized (e.g., innovative, interdisciplinary solutions to big, complex problems).
Future Research Streams

- Add Second Slide- Conduct studies that use large, random sampling of research universities to assess the relationship of strength themes (e.g., student development) or strength message themes (e.g., credible, leading faculty) to fundraising $ outcomes.

- Explore and validate attributes of university-donor relationship (i.e., donor relevant) and effects upon fundraising outcomes using qualitatively and/or quantitatively based approaches.

- Replicate this study on another population sample of Tier One Research Universities.

- Use this study design on a different type of Carnegie (2000) classed institutions, or on a different population type (e.g., hospital or school), to validate findings.

- Conduct a longitudinal study of fundraising messages, dollars raised and percentage change in funds raised in private and public universities.
Q and A

- Define intuitional strengths review notes from proposal. Remember the questions asked.
- Trade offs in number of universities.
- Methods
- Practice
- Where to from here. Single case study, multiple case study, methods conference.
Gratitude

Thank you for your contributions and support of this project
### Sources of Information by Relevant Message Themes

<table>
<thead>
<tr>
<th>Message Theme</th>
<th>Source of Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant</td>
<td>University</td>
</tr>
<tr>
<td>Interviews</td>
<td>Website</td>
</tr>
<tr>
<td>Publications</td>
<td>Fundraising</td>
</tr>
<tr>
<td>Appeals</td>
<td></td>
</tr>
</tbody>
</table>

#### Strength success stories
- yes

#### with testimonials
- yes
- yes
- yes
- yes

#### Innovative, interdisciplinary
- yes
- yes
- yes
- yes

#### solutions to complex problems
- yes
- yes
- yes
- yes

#### Donor relationship
- yes
- yes
- yes
- yes

#### Credible, leading faculty or program
- yes
- yes
- yes
- yes

#### Areas of Strength
- yes
- yes
- yes
- yes

#### Quality of life
- yes
- yes
- yes
- yes
Research Questions

- What institutional strengths were important in order to achieve successful fundraising outcomes?

- How were institutional strengths communicated in effective fundraising messages?