Media capabilities as a comprehensive construct for research on media choice: Assessment of a measurement model [Slides]

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Media capabilities as a comprehensive construct for research on media choice:
Assessment of a measurement model

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Background

• Many scholars in different disciplines examined the determinants of people’s media choices, e.g., economics discipline, comm. study, psychology, etc.

• No comprehensive theoretical construct which takes into account 1) the significant impact of media technology evolvement and 2) the advantages of new media technologies in the assessment of media choice.
Research purpose & RQ

The purpose of this study is to examine the reliability and validity of the proposed three dimensions of media capabilities as a tool to compare media and predict media choice.

Does the construct of media capabilities consist of the three dimensions of technology capabilities, gratification capabilities, and source capabilities?
Significance of Study

• The concept of media capabilities is not a mere psychological metric but tied in closely with the media’s **physical** and **content** characteristics.

• This study examines media use as a habit and a leisure activity, not in organizational or working context.

• This concept assesses the overall capabilities from technology, gratification, and source aspects: capture the full range of consideration in media selection.
Media Capabilities

- Originated from organizational communication
- Used to emphasize on technical characteristics of media (capacity, modes, symbols), rehearsability, and reprocessability
- Individually-based and vary from one user to another
- This study examines news media capabilities from 3 dimensions: 1) technology, 2) gratification satisfaction and 3) content sources
<table>
<thead>
<tr>
<th>Factors</th>
<th>Item Coding</th>
<th>Item Descriptions</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology capabilities</td>
<td>TC1</td>
<td>Usefulness (PU)</td>
<td>TAM model (Davis et al., 1989; Davis, et al., 1989; Igbaria et al., 1995; Mathieson, 1991)</td>
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<tr>
<td></td>
<td>TC2</td>
<td>Ease of Use (PEOU)</td>
<td></td>
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<tr>
<td></td>
<td>TC3</td>
<td>Interactivity</td>
<td>Diffusion of Innovations (Rogers, 1983)</td>
</tr>
<tr>
<td></td>
<td>TC4</td>
<td>user control</td>
<td></td>
</tr>
<tr>
<td>Gratification capabilities</td>
<td>GC1</td>
<td>Entertainment gratification</td>
<td>Use and Gratification Theory (Katz et al., 1973)</td>
</tr>
<tr>
<td></td>
<td>GC2</td>
<td>Information gratification</td>
<td></td>
</tr>
<tr>
<td>Source Capabilities</td>
<td>SC1</td>
<td>Credibility</td>
<td>News credibility (Flanagin &amp; Metzger, 2000; Schweiger, 2000; Abdulla et al., 2002; Johnson &amp; Kaye, 1997, 2000; Lu &amp; Andrews, 2006;</td>
</tr>
<tr>
<td></td>
<td>SC2</td>
<td>Timeliness</td>
<td></td>
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<tr>
<td></td>
<td>SC3</td>
<td>Content organization</td>
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<tr>
<td></td>
<td>SC4</td>
<td>Diverse content</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SC5</td>
<td>Quality in preferred topics</td>
<td></td>
</tr>
</tbody>
</table>
Dimensions of Media Capabilities

Technology capabilities

Gratification capabilities

Source capabilities

media capabilities

TC1
TC2
TC3
TC4

GC1
GC2

SC1
SC2
SC3
SC4
SC5
Demographics of sample

Gender:
- Male: 49.80%
- Female: 50.20%

Ethnicity:
- Caucasian: 82.30%
- African-American: 4.20%
- Hispanic: 2.50%
- Over 90%
- Asian: 0.90%
- $30,001-$60,000: 12.40%
- Under $30,000: 0%

Source: IR offices
Demographics of sample

Age
- 18-35 years: 55.80%
- 36-55 years: 18.10%
- Above 55 years: 26.10%

Education
- Grade 11 or less: 16.70%
- High School or equivalent: 54.50%
- 1 to 3 years of college or technical school: 17.00%
- College graduation (4 years): 9.90%
Assessment of Measurement Model

1. Overall structural model fit by fitness indices
   (modification based on modification index)

2. Convergent validity
   - the degree to which a measure correlate highly with
     other measure designed to measure the same construct
   - High loading on the factor (0.67-0.83)
   - High Cronbach’s alpha (0.77-0.89)

3. Discriminant validity
   - low correlation between different constructs
   - higher variance extracted estimates of the construct
     than
     square correlation estimates between constructs
$\chi^2 = 74.56$, CFI=0.98, NFI=0.99, RMSEA=0.04
Conclusion and limitation

• The path coefficients show that the three components are likely to contribute people’s assessment to media capabilities equally. Amongst them, **technology capabilities** are most strongly correlated with media capabilities.

• Limited investigation regarding the incremental validity of the media capabilities construct is necessary. More new sub-items and measure could be developed.

• Further cross-validations with different samples are needed and beyond news media

• Improvement on multicollinearity between technical capabilities and gratifications capabilities.