Leadership Style and the IT Leader in Higher Education

Summary of Findings

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Successful experimentation means we need to kiss a lot of frogs to find that prince. As we do, we learn. So we might begin recognizing royal froggy behavior or see the faint marks on their heads left by little crowns. That may help reduce the number of frogs we have to kiss, but we still have to keep looking.

—Jim Clemmer
Leadership Style &
The IT Leader in Higher Education

- Part 1: You Have to Have Style
  - Critical IT Competencies
  - Leadership Style
- Part 2: A Tale of Two CIOs
  - “CIOs” versus “IT Directors”
- Part 3: Leadership Style Matters … Again
  - Transformational Leadership Styles
- Part 4: Innovating with Style
  - Relating Leadership Style to Support for Innovation
Two Studies on IT Leadership in Higher Education

- **Study 1:**
  - *Quantitative mail survey*
  - 230 respondents from a random, stratified sample
  - *Focus on Leadership Style and Effectiveness*
  - Some findings are reported in a recent ECAR research bulletin

- **Study 2:**
  - *Quantitative web survey*
  - 1850 U.S. respondents from EDUCAUSE members
  - *Focus on Leadership Style and Innovation Climate*
  - Some findings are reported in an upcoming ECAR report
Part 1: You Have to Have Style

The modern CIO “needs technological expertise and experience, business know-how and judgment, and behavioral skills of a high order, especially in leadership, communication, teamwork, and facilitating change.”

The Nature of CIO Competencies

Competencies For IT Leader Effectiveness

Knowledge-Based

- Business Acumen
- Human Acumen
- Technical Acumen

Activity-Based

- Manage Relationships
- Convey Relevance & Value of IT
- Plan & Implement IT-based Solutions

Knowledge-based Competencies In Higher Education

Knowledge-based competency factors respondents identified as critical to success in higher education IT ...

<table>
<thead>
<tr>
<th>Business Acumen</th>
<th>Human Acumen</th>
<th>Technical Acumen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Institution objectives</td>
<td>1. Successful people who embody the values and character of the institution and its culture</td>
<td>1. Security applications (system and network)</td>
</tr>
<tr>
<td>and goals</td>
<td></td>
<td>2. World Wide Web or Internet</td>
</tr>
<tr>
<td>2. Institution resources</td>
<td>2. Set of expectations that members of a group have for one another</td>
<td>3. Electronic mail</td>
</tr>
<tr>
<td>3. IS staff</td>
<td>3. Informal reporting structures</td>
<td>4. LANs</td>
</tr>
<tr>
<td>4. Institution mission</td>
<td></td>
<td>5. Database technology</td>
</tr>
<tr>
<td>5. Students</td>
<td></td>
<td>6. Course management software</td>
</tr>
<tr>
<td>6. Top-level administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Faculty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Institution policies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Activity-based Competencies
In Higher Education

Activity-based competency factors respondents identified as critical to success in higher education IT ...
Activity-based Competencies in Higher Education

Activity-based competency factors respondents identified as critical to success in higher education IT ...

**Convey Relevance & Value of IT**

1. Disseminate information about the need and rationale for IT-based change
2. Promote IT as an agent of institutional transformation
3. Disseminate information about the results of recently completed IT-based projects
4. Disseminate information about the benefits/costs of IT-based change
5. Stress the economic value of IT to top-level institutional administrators
Activity-based Competencies In Higher Education

Activity-based competency factors respondents identified as critical to success in higher education IT ...

Plan & Implement IT-based Solutions

1. Create a participative IT planning process
2. Procure and organize the technological expertise necessary for systems development
3. Involve those to be affected by an IT-based change in its design and implementation
4. Disseminate results of IT projects
5. Coordinate IT projects
6. Participate in IT projects
7. Procure and allocate the equipment needed for systems development
8. Encourage an iterative systems-development approach by IT staff to ensure flexibility to evolving system requirements
### Significant Relationships Among Competencies

#### Activity-based Competencies

<table>
<thead>
<tr>
<th></th>
<th>Manage Relationships</th>
<th>Convey Relevance</th>
<th>Plan and Implement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Human</strong></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Technical</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

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**Part 1: Competence and Style**
## The Nature of Leadership Style

<table>
<thead>
<tr>
<th>Leadership Dimension</th>
<th>Description of Preferences</th>
</tr>
</thead>
</table>
| Trustee              | - **Rules and regulations** guide decision making  
                        - Prefer **defined goals and tasks** to accomplish work  
                        - Approach relationships with logic |
| Adapter              | - Aware of political interests and **base decisions on contingent considerations**  
                        - Prefer **bargaining and compromise** to accomplish work  
                        - Means-oriented in relationships |
| Collaborator         | - Intuitive sense of what is best for all guides decision making  
                        - Prefer to **use consensus** to accomplish work  
                        - Concerned with “people” in relationships |
| Entrepreneur         | - “**Big picture**” **thinker** who prefers strategic decisions  
                        - Prefers calculated risks and work toward high-value goals  
                        - Use innovation and intuition in creating relationships |

Respondents Most Favored Collaborator and Adapter Styles

- Collaborator: 47%
- Adapter: 17%
- Entrepreneur: 13%
- Trustee: 4%
- Collaborator-Entrepreneur: 6%
- Collaborator-Adapter: 5%
- Adapter-Entrepreneur: 3%
- Other Combinations: 5%

Part 1: Competence and Style
The Influence of Style

<table>
<thead>
<tr>
<th>Activities</th>
<th>Leadership Styles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage Relationships</td>
<td>Trustee</td>
</tr>
<tr>
<td>Convey Value &amp; Relevance</td>
<td>Trustee</td>
</tr>
<tr>
<td>Plan &amp; Implement</td>
<td>Trustee</td>
</tr>
</tbody>
</table>

- Adapter styles were also most strongly related with other traits associated with CIO effectiveness, such as:
  - Satisfaction with involvement in IS planning efforts; Satisfaction and success with the IS strategic planning; participation in non-IT decisions; Holding an executive officer position
Some Concerns From The Data …

- Across the board, the top IT managers in higher education are involved in top-level IS planning. However …
  - Fewer than 75% are involved with institutional strategy
  - Even fewer participate in non-IT decisions or are involved with running their institutions
  - Most respondents also gave a lower evaluation to their ability to link IS plans with institutional plans.
  - As a whole, the top-level IT manager in higher education has a poor satisfaction level with IS strategic planning processes.

- This set of findings is important because prior research clearly links these factors to the effectiveness of the IT planning process, the CIO, and the IT function in general.
Part 1:  Key Observations

- From these findings, two specific observations stand out:
  
  - *Developing better adapter leadership behaviors or recruiting individuals with stronger adapter behaviors should result in IT decisions that are more closely aligned to the institution’s needs.*
  
  - *Institutions should make additional effort to involve their top IT leaders in developing institutional strategy, running the institution, and participating in non-IT decisions.*
  
- As a result, both the top IT leadership and the IT function in general should become more effective for institutions pursuing this strategy.
As the role elevates within institutions, the nature and scope of CIO responsibilities will change as well. Emphasis on the more technical or traditional "IT Director" position will decrease in favor of CIOs with detailed understanding of higher education and an institutional perspective on strategy and operations.
## A Comparison of IT Leaders: Traits

<table>
<thead>
<tr>
<th></th>
<th>Type 1: CIO</th>
<th>Type 2: IT Director</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where Most Likely Found:</td>
<td><em>Larger institutions and research institutions</em></td>
<td><em>Smaller institutions and BA/AA and Community Colleges</em></td>
</tr>
<tr>
<td>Most Likely Reporting To:</td>
<td><em>President, Chancellor, or Chief Academic Officer</em></td>
<td><em>Chief Financial Officer</em></td>
</tr>
<tr>
<td>On Cabinet?</td>
<td><em>More likely yes</em></td>
<td><em>More likely no</em></td>
</tr>
<tr>
<td>Participate in non-IT decisions?</td>
<td><em>More likely yes</em></td>
<td><em>More likely no</em></td>
</tr>
<tr>
<td>Advanced Degrees?</td>
<td><em>More likely yes</em></td>
<td><em>More likely no</em></td>
</tr>
<tr>
<td>Work Experience?</td>
<td><em>More Inside Higher Ed</em></td>
<td><em>More Outside Higher Ed</em></td>
</tr>
<tr>
<td></td>
<td><em>Less Outside Higher Ed</em></td>
<td><em>Less Inside Higher Ed</em></td>
</tr>
<tr>
<td>Technical Orientation?</td>
<td><em>Less technically oriented</em></td>
<td><em>More technically oriented</em></td>
</tr>
<tr>
<td>Scope of Responsibility</td>
<td><em>Typically wider</em></td>
<td><em>Typically more narrow</em></td>
</tr>
</tbody>
</table>
## A Comparison of IT Leaders: Outcomes

<table>
<thead>
<tr>
<th>Type 1: CIO</th>
<th>Type 2: IT Director</th>
</tr>
</thead>
<tbody>
<tr>
<td>More likely to exhibit higher Adapter and Entrepreneur leadership behaviors</td>
<td>More likely to exhibit higher Trustee leadership behaviors</td>
</tr>
<tr>
<td>More likely to indicate success at garnering resources and participating in organizational decisions</td>
<td>Most likely to identify strategic IT planning as an issue or problem for institution</td>
</tr>
<tr>
<td>More likely to be satisfied with relationship with the top institutional leader</td>
<td>More likely to have lower IS planning satisfaction</td>
</tr>
<tr>
<td></td>
<td>More likely to indicate challenges in linking IT investments with organizational directions</td>
</tr>
</tbody>
</table>
Part 2: Key Observations

- A “true” CIO as the top IT leader is important
- Such a leader should:
  - Participate in non-IT decisions
  - Participate in forming organizational strategy
  - Report to the top institutional leader and sit on the Cabinet as an equal
- There is strong and repeated evidence in these studies and elsewhere that “true” CIOs are more successful at matching IT to organizational goals and objectives
Leadership style matters. Results from the survey support earlier findings that leadership behaviors are related to effective management. For the IT function this effectiveness is reflected in improved strategic alignment, and increased emphasis on skills and activities important to the effectiveness of IT leaders.
## The Nature of Transformational Leadership

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized Influence</td>
<td>The leader acts as and is perceived as a role model for followers. The leader is respected and trusted by followers and provides a sense of both mission and vision that others want to follow.</td>
</tr>
<tr>
<td>Inspirational Motivation</td>
<td>The leader communicates high expectations for performance. Through images and emotional appeals the leader “inspires” followers to pursue a shared vision over individual self-interests.</td>
</tr>
<tr>
<td>Intellectual Stimulation</td>
<td>The leader stimulates and encourages both creativity and innovation. The leader provides an environment fostering experimentation, empowerment, and new approaches to problem solving.</td>
</tr>
<tr>
<td>Individualized Consideration</td>
<td>The leader actively listens to and cares about the individual needs of followers. The leader acts as a mentor or coach, and provides attention and direction to followers individually.</td>
</tr>
</tbody>
</table>
Benefits of Having IT Leaders with Strong Transformational Behaviors

- Respondents with stronger transformational leadership behaviors were:
  - Better at sustaining conversation with upper level executives about financial issues or pressures facing the institution
  - Better at knowing what keeps upper level executives awake at night and how IT could help
  - Better at participating in shaping institutional academic directions
  - Better at participating in shaping institutional business directions
Benefits of Having IT Leaders with Strong Transformational Behaviors

Respondents with stronger transformational leadership behaviors were:

- More likely to be engaged in regular executive discussions about IT implications of institutional decisions
- More likely to spend time working with executives to set expectations and delivery commitments based on what is possible
- More likely to use IT architectural considerations to focus design and delivery efforts
- More likely to believe that negotiations strengthen rather than weaken relationships between IT and the rest of the institution
Drawback of Leaders with More Non-Transformational Behaviors

- Respondents with stronger non-transformational leadership behaviors were:
  - More likely to identify “difficulty assessing and proving value of IT” as a barrier to effectiveness
  - More likely to identify “ineffective communication with users” as a barrier to effectiveness
  - More likely to identify “unrealistic user expectations” as a barrier to effectiveness
The Good News … Good Leadership Behaviors May Be “Learnable”

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Had a Mentor?</th>
<th>Percent with High Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized Influence</td>
<td>Yes</td>
<td>71</td>
</tr>
<tr>
<td>Inspirational Motivation</td>
<td>Yes</td>
<td>50</td>
</tr>
<tr>
<td>Intellectual Stimulation</td>
<td>Yes</td>
<td>54</td>
</tr>
<tr>
<td>Individualized Consideration</td>
<td>Yes</td>
<td>51</td>
</tr>
</tbody>
</table>

Relationship of Mentoring To Overall Transformational Leadership Score

Part 3: Leadership Style Matters
Part 3: Key Observations

- Leadership style is again very important
  - Individuals with strong transformational leadership behaviors were highly associated with organizational or IT-related benefits

- Mentoring is important
  - We may be able to develop better future IT leaders by establishing and nurturing mentor relationships with other good leaders
Part 4: Innovating with Style

The world leaders in innovation and creativity will also be world leaders in everything else.

—Harold R. McAlindon
## The Climate of Support for Innovation is Important

<table>
<thead>
<tr>
<th>IT Outcome</th>
<th>High</th>
<th>High Average</th>
<th>Low Average</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT unit maintains strong relationships with other units across campus</td>
<td>96.3</td>
<td>81.8</td>
<td>56.7</td>
<td>16.6</td>
</tr>
<tr>
<td>IT is a prominent element in institution-wide strategic plans</td>
<td>90.8</td>
<td>73.0</td>
<td>65.0</td>
<td>45.6</td>
</tr>
<tr>
<td>IT organization has strong project management and process management skills</td>
<td>92.6</td>
<td>74.8</td>
<td>44.5</td>
<td>15.9</td>
</tr>
<tr>
<td>IT organization makes organizational and personnel changes to accommodate deployment of new technologies</td>
<td>94.5</td>
<td>82.3</td>
<td>54.2</td>
<td>24.4</td>
</tr>
<tr>
<td>IT organization actively communicates IT architecture to campus</td>
<td>90.7</td>
<td>72.6</td>
<td>49.4</td>
<td>22.4</td>
</tr>
<tr>
<td>IT organization is increasingly influential</td>
<td>96.3</td>
<td>89.9</td>
<td>68.4</td>
<td>42.3</td>
</tr>
<tr>
<td>IT organization has staff members who are well trained in technologies required to do their jobs</td>
<td>96.3</td>
<td>89.4</td>
<td>74.7</td>
<td>41.3</td>
</tr>
</tbody>
</table>
A Climate of Support for Innovation is Important

<table>
<thead>
<tr>
<th>IT Outcome</th>
<th>High Average</th>
<th>Low Average</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT initiatives often result in sustainable and positive cultural change</td>
<td>88.9</td>
<td>75.0</td>
<td>48.9</td>
</tr>
<tr>
<td>People at institution have clear understanding of how IT projects relate to institutional strategy and goals</td>
<td>69.8</td>
<td>42.1</td>
<td>16.9</td>
</tr>
<tr>
<td>Institution’s IT infrastructure is recognized as an important institution-wide asset</td>
<td>96.3</td>
<td>86.4</td>
<td>71.5</td>
</tr>
<tr>
<td>Institution has a reputation for being forward-thinking in the use of IT</td>
<td>88.9</td>
<td>72.3</td>
<td>52.9</td>
</tr>
<tr>
<td>IT initiatives challenge long standing procedures and processes</td>
<td>85.2</td>
<td>82.5</td>
<td>62.6</td>
</tr>
<tr>
<td>Leadership of the institution understands the value of IT</td>
<td>90.8</td>
<td>80.0</td>
<td>67.2</td>
</tr>
<tr>
<td>Departmental plans are aligned with institutional plans</td>
<td>70.4</td>
<td>48.2</td>
<td>27.7</td>
</tr>
</tbody>
</table>
Where’s the Climate of Support for Innovation in Higher Ed IT?

One of the most interesting findings from this study is the strong evidence that the climate of support for innovation in IT across respondents as a whole is actually quite low.
## Relationship of Leadership Style to Support for Innovation

<table>
<thead>
<tr>
<th>Support for Innovation Score</th>
<th>Transformational Leadership Style Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>High/High Average</td>
<td>49.0</td>
</tr>
<tr>
<td>Low/Low Average</td>
<td>51.0</td>
</tr>
</tbody>
</table>

Thus, the behaviors associated with leadership style again appear to be quite important to the success of IT leaders in higher education.
Part 4: Key Observations

- Support for innovation is unquestioningly important in relation to the effectiveness of IT Leaders
  - A climate of support for innovation is strongly related to several key IT outcomes, including those associated the CIO competencies

- Low support for innovation among respondents as a whole
  - The low support for innovation scores among the population of respondents as a whole may be some cause for concern
  - However, note that NONE of the respondents with high support for innovation scores had low transactional leadership scores

- Thus, strong transformational leadership behaviors are a necessary, but not sufficient, requirement for creating a climate that supports innovation in the higher education IT function
Overall Lessons to Be Learned

- **Leadership style influences:**
  - *The knowledge and activities IT leaders view as critical to the success of the IT function*
  - *Where IT leaders spend their time, how they pursue IT alignment, and the climate of support for innovation*
  - *The effectiveness of IT leaders at achieving critical IT outcomes*

- **Steps educational institutions can take:**
  - *Consider mentoring programs or relationships among existing and future IT leaders*
  - *When recruiting new IT leaders, look for evidence of transformational leadership behaviors*
Questions

- Contact Information
  - Dr. Mark R. Nelson
    nelson@rpi.edu

- Additional information on both IT Leadership studies is available through the ECAR website at:
  - www.educause.edu/ecar

Thank You!