

Culture and Collaborative Technologies

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Background

- For-profit vs. nonprofit
 - Millennial, Inc. (for-profit) - 20's and 30's, college graduates +
 - GenX (nonprofit) - 30's and above, college graduates +
- Cultural differences
 - Similar structure and systems in place, however values and practices were different
- Hofstede's cultural theory model
 - How do two culturally different organizations use collaborative software?

Collaborative Software

- 1951 - Douglas Engelbart conceived "groupware", contributed toward ARPANET
- Boom in the 90's
 - U.S. Government: COMPASS
 - Boeing and IBM: Lotus Notes
- Today, it's ubiquitous - built into most applications and Web 2.0

Culture and Technology

- Hypothesis: Culture has an impact on how collaborative software is used
- Three cultural dimensions were used as a framework for this study:
 - Power Distance (PDI)
 - Uncertainty Avoidance (UAI)
 - Collectivism vs. Individualism (IDV)

Methods

- Observations were made in both organizations to formulate a hypothesis
- Interviews
 - GenX: Two female participants
 - Quality Improv. Analyst (30-34) & Education Admin (40-49)
 - Millennial, Inc.: One male and one female
 - Software Engineer (24-29) & Project Manager (30-34)
- Values Survey Module 2008 (VSMo8)
 - Added question to demographics to distinguish type of organization
 - Stratify by org. type, age group, and gender using the formulas provided by the VSMo8 manual

Results

- Observations

- *Millennial, Inc.* - high UAI, low IDV, low PDI
 - Layout: team-based
 - Practices: heavy documentation, transparency, stand-ups, training
 - Tools: SharePoint, MS Office, JIRA, Wiki, Contour
- *GenX* - low UAI, high IDV, high PDI
 - Layout: departmental
 - Practices: less documentation, word-of-mouth, little or no training
 - Tools: SharePoint, MS Office, JIRA, Wiki

Results

• Interviews

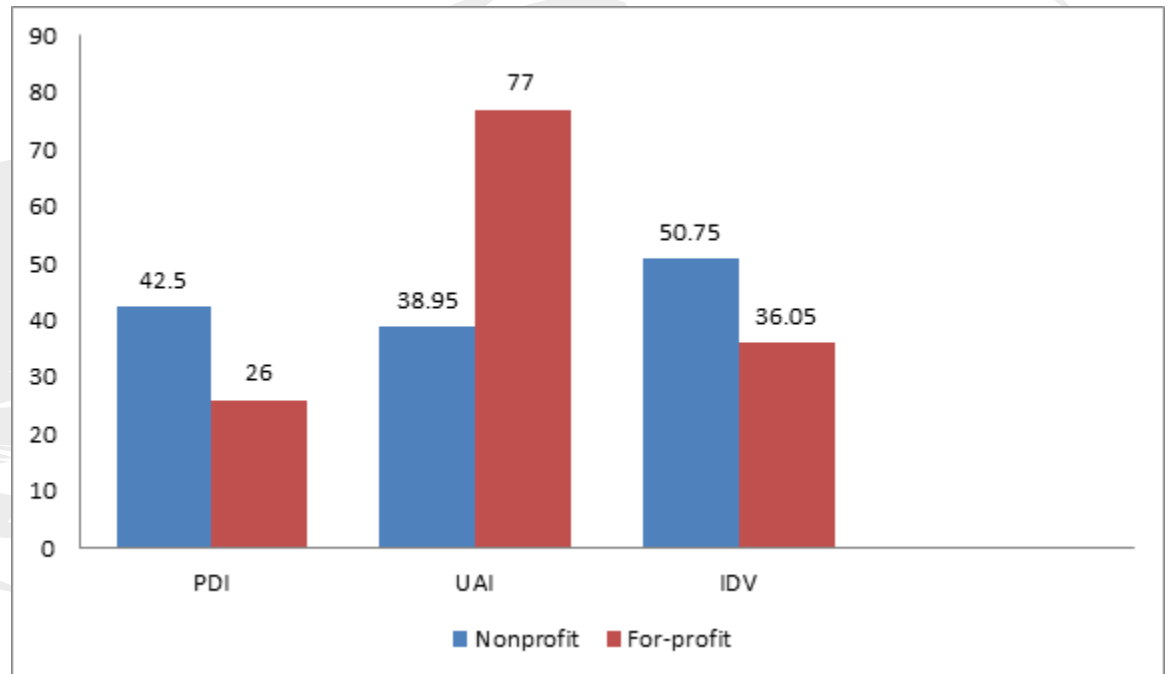
Categories	Practices	
	<i>Millennial, Inc.</i>	<i>GenX</i>
Communication	Meetings, “stand-ups”	Email, phone
“Groupware”	Facilitate processes, reviews, document sharing	Document sharing
Issue Tracking	JIRA, stand-ups	In-person, email, JIRA
Requirements Management	Contour, stand-ups	In-person, formal meetings, Wiki
Transparency	Software, triggered emails	Email, in-person, SharePoint

Cultural Dimension	Examples
PDI	<p>“I have very little power in what decisions to make. Management has more weight and decides where project goals and expectations lie.” – <i>Software Engineer</i></p> <p>“I identify problems and put in an issues list in SharePoint where people can see it.” – <i>Project Manager</i></p>
UAI	<p>“We use [collaborative software] to check if companies deliver or make requirement changes. It’s nice that it tracks changes and keeps me in the loop.” – <i>Software Engineer</i></p> <p>“We share everything on SharePoint” – <i>Project Manager</i></p>
IDV	<p>“I try to resolve with others on the team first.” – <i>Software Engineer</i></p> <p>“SharePoint looks like MySpace with profiles, hierarchy in the company, and lots of comments and likes.” – <i>Project Manager</i></p>



Results

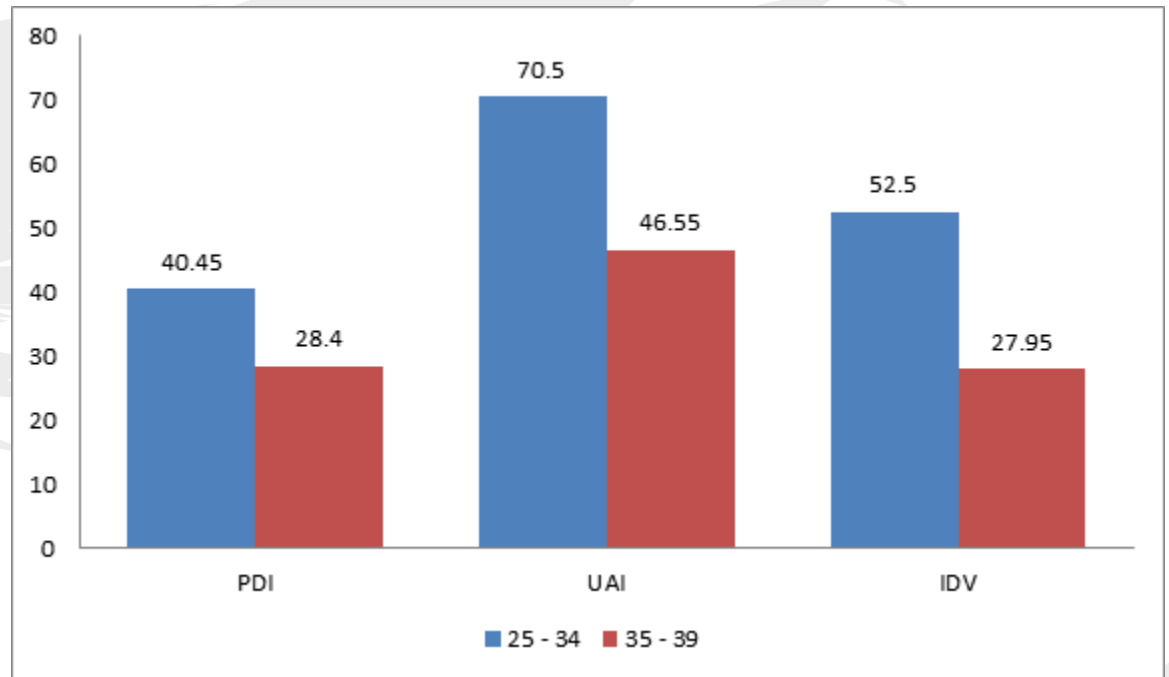
- Survey
 - Org. Type



	Total Responses	Mean Age	PDI	UAI	IDV
Nonprofit	9	40-49	42.50	38.95	50.75
For-profit	5	25-29	26.00	77.00	36.05

Results

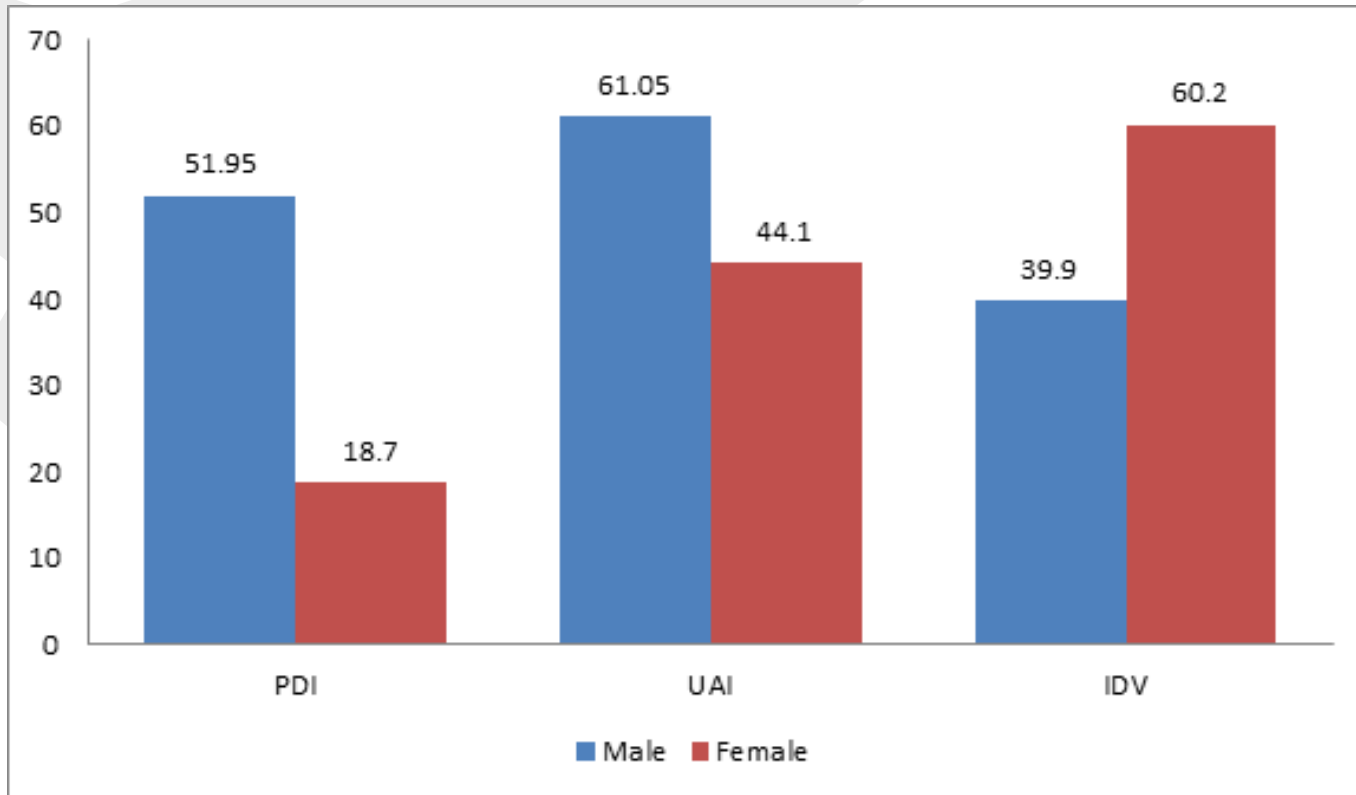
- Age Group



Age Group	PDI	UAI	IDV
25 - 34	40.45	70.5	52.50
35 - 59	28.4	46.55	27.95

Results

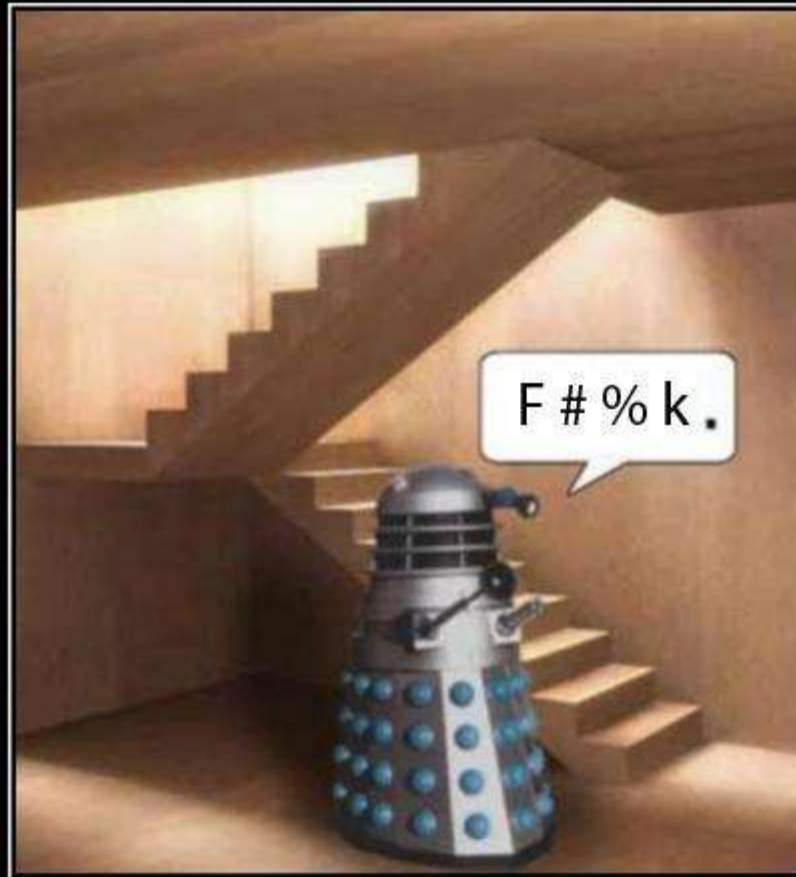
- Gender



Discussion

- Culture was different between organizations
 - Comparing organization type (for-profit vs. nonprofit) supported hypothesis
- Although organizations had different age groups, age was not a factor
- Gender alone wasn't helpful
- TBD





LIMITATIONS

Everyone has them

Limitations

- Compared two organizations within Chicago, IL
- Explored three cultural dimensions: PDI, UAI, IDV
- Interview
 - Questions not collaborative software specific
 - GenX participants from same department
- Survey respondents
 - Small n - outliers skew data
 - Majority respondents from Millennial, Inc. and GenX



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