

Managing aging workforce: Filling the gap between what we know and what is in the system

Shuhua (Monica) Liu and Raya Fidel

The Information School, University of Washington

Seattle WA 98105 USA





Roadmap

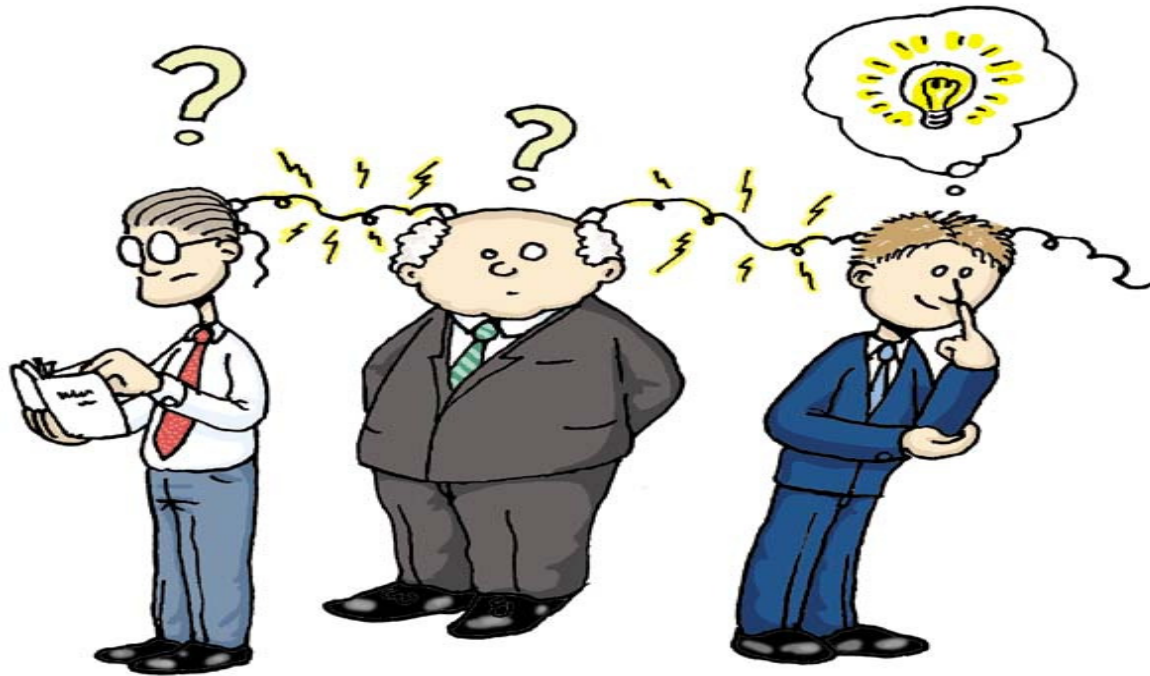
- Motivation for the study
- What is knowledge and how can it be shared?
- Employee motivation and commitment
- Research design
 - The research site
 - The participants
- Findings
 - The opportunities
 - The challenges
- Implications for government operations

Motivation for the study

- An alarming reality: Losing valuable experienced individuals and their expertise in US public sectors
 - 53% of the federal civil servants are eligible to retire by 2009.
 - The Department of Defense lost 36% of its civilian employees during the 90's. By 2005 the Department lost up to 50% of its civilian acquisition workforce.
 - Growing concerns about the pentagon's ability to achieve its future weapon acquisition and logistics objectives
 - The National Aeronautics and Space Administration (NASA): 1/3 of the Space Shuttle's program staff is to be lost to retirement

Motivation for the study

- An persistently popular proposal
 - Many researchers have suggested that ICT solely can be employed to retain knowledge for long-term sustainability



Knowledge and Sharing?

- What is knowledge
 - Tacit knowledge and explicit knowledge are two distinct and inseparable dimensions of knowledge, neither being the variant of the other (Polanyi, 1969).
- How can knowledge be shared?
 - The sharing of both can only occur during social processes where both dimensions can be integrated seamlessly into individuals' daily business activities (Cook and Brown, 1999).
 - Facilitated by advanced technology.

Employee Motivation and Commitment

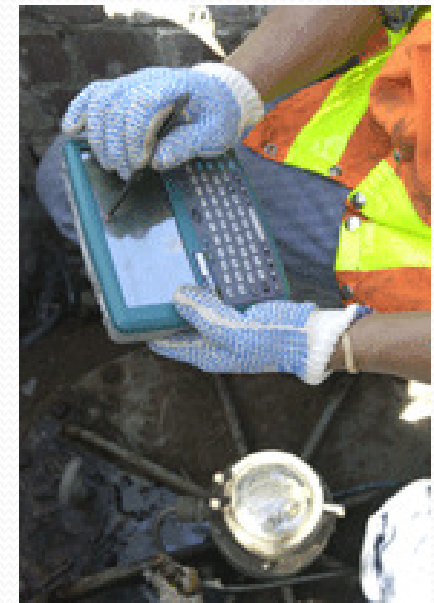
- Challenges to current economic perspectives of employee motivation
 - Knowledge is in individuals' brain and hard to be quantitatively measured (Polanyi, 1966)
 - Knowledge sharing doesn't have an immediate outcome that can be recognized by the current human resources evaluation standards (Cabrera and Cabrera, 2002).
 - Senior employees may experience a different learning curve in using ICT from that is experienced by their young colleagues (Taylor, 1997)
- How can public sectors employ the most efficient motivating mechanisms to achieve the optimal results?

Research Design

- The functional approach towards motivation (Snyder and Cantor, 1998)
 - Individual level (e.g. Monetary incentives)
 - Inter-personal level (e.g. Impression management)
 - Relational level (e.g. reciprocity)
 - Group-level (e.g. team identification)
- Research questions
 - What levels of motivating factors are affecting senior employees decisions to share knowledge in real work practices
 - What challenges senior employees face when sharing knowledge in public sectors?
 - What is the role of advanced technological tools in this sharing process?

The Research Methods and Setting

- Naturalistic field study
 - Interviews (24) and observations (19) of field workers and of managers
 - Analysis of documents
 - Data collection and analysis based on the case-study method
- The City: Recent ICT adoption
 - The backend logistics and asset management system used mainly by the management
 - The wirelessly connected mobile devices mainly by fieldworkers
- The Department: The main caretaker of the drainage and wastewater system in the City.



Participants

- The Department: Formed of two districts
 - 45,396 catch basins; 1,491 miles of combined sewer and sanitary pipelines; 450 miles of storm drainage pipelines; 212 miles of ditches and culverts; 69 pump stations
 - 6 teams in total for the two districts, led by 3 senior team leaders and 3 junior team leaders
 - Divided into several sub-teams, each sub-team consists of at least an experienced worker, a newly-hired.
- Participants
 - 2 district managers (>15 years)
 - 3 senior team leaders (>10 years)
 - 2 junior team leaders (<10 years)
 - 4 senior experienced workers (>15 years)
 - 5 newly-hired employees (<6 months)

Findings I: What is motivating senior experienced workers to share what they know?

- Senior workers are generally aware that monetary bonus might not be available on a regular basis because public sectors are usually funded by taxpayers
- Four leading motivating factors:
 - To serve the public good (Group level)
 - Effective commitment to their team leaders (Interpersonal and relational)
 - Social recognition (Interpersonal and relational)
 - Commitment to the City (Group level)

Findings II: Challenges senior experienced workers face

- Conflict between structure and the nature of

There is no way you can put in all the knowledge in the system. I mean, how can I tell the next person to take it out of the water and leave it just upon the surface at an appropriate point when operating the machine? I mean what is an appropriate point? I don't know, I just know that you need to do it, you have to feel it

- Differences among managers and experienced fieldworkers as to what information is relevant for field operation.

Findings II: Challenges senior experienced workers face

- Training for senior fieldworkers in using the system

You know, it take time to figure out the whole thing, maybe longer for some old timers than young ones. If you have never touched a computer for your whole life, can you imagine getting that whole thing in one day?...Gosh, people forget things too, I need reminders after a while like 'how does that work out again?

Findings II: Challenges senior experienced workers face

- Conflict between lower management's efforts to achieve goals of planned work and senior experienced employees' extra efforts to share knowledge

“We have to do so many [tasks] in a whole day. After a long day, I just want to go home and have a nice meal. So I just fill in what is required and my time, and then go home.”

Implications and current status

- Implications
 - A transformative change instead of a technical change
 - Effective performance evaluation policy, tailored training efforts, strategic planning efforts, employees learning capability and a transparent communication climate all have to be in place before a successful knowledge sharing initiative can be launched.
 - The motivating role of lower management and team leaders

Implications and current status (cont.)

- Implications (Cont.)
 - Differences between public sectors and their private counterparts when it comes to employee motivation
 - Limitations associated with technology when motivating senior experienced workers for knowledge sharing
- Current status:
 - Preliminary yet informative
 - In the process of expanding investigation

köszönöm ! תודה dĕkuji

mahalo 고맙습니다

thank you

merci 谢谢 *danke*

Ευχαριστώ شُكْرًا

どうもありがとう *gracias*
