

Transactive Memory Theory between People and Information Technology

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Abstract

In 2011, Sparrow addresses "Google Effect" from a psychological perspective. It considers humans change their memory by information technology. The results said that the Internet has changed the human brain's ability to process information; it saw any personal computer as external memory. In the past, knowledge workers often described important content in 3M sticky notes. When there is a need to recall the content of the important things, as long as knowledge worker can to find the sticky know the content of the story. Now, knowledge workers can use information devices and universal network to use information services provided by the technology industry. They can store their knowledge in cloud space, let others or self-access in anytime and anywhere. They also can use the search engine to find knowledge which is requested. Overall view of the phenomenon, cloud technology has played an important role in personal knowledge management and change people's knowledge identification, knowledge acquisition, knowledge sharing behavior and knowledge stored on.

We think the concept of transactive memory theory is matching the "Google Effect". This theory was proposed by Wenger in 1985. It considers human has the ability to leverage external storage memory. These external storage memories in addition to the memorandum and archives, but also includes interdependence between populations personal memories message. This theory usually applies in the team level research in the past. These researchers proposed that could be discerned from the differentiated structure of members' knowledge (specialization), members' beliefs about the reliability of other members' knowledge (credibility), and effective, orchestrated knowledge processing (coordination). In 2011, Wenger reinterpreted transactive memory theory. He considers the theory can be used to explain the interaction between people and information technology. We consider it necessary to change and adjust these three constructs used to explain the relationship between people and information technology.

In the specialization, people are looking for knowledge at different cloud space which depends on different needs. For example, when knowledge workers want to access their knowledge which is write in the document in past, they will be using Google Drive or Dropbox. When knowledge workers want to find new knowledge, they will be using Google Search or Bing. We believe this construct will be defined as people will use different information technology to find different characteristics of knowledge.

In the credibility, when people use any information technology to find knowledge, they will identify the accuracy by their mind. For example, we usually use the result of Google search by the information's date, source and the rank of google sort. In the knowledge community of practice, we also identify the credibility by ranking. We believe this construct will be defined as the degree of knowledge that people trust.

In the coordination, when people want to get knowledge by any information technology, they will be limited to information technology device. For example, we will use the cursor to click the detail catalog when we use a traditional computer device (desktop or notebook). But we will use a special APP and in limited visual paging to operate by our finger when we use a smartphone or tablet. We believe the interface is more important in the coordination between people and information technology. So we will be defined this construct as the degree of friendly of information technology interface.

Therefore, our future study wanted to reconstruct the transactive memory theory. We want to use this theory to explain the interaction between people and information technology. We hope to get more ideas and opinions with each construct define and explain.