The Hidden Knowledge

Ido Roll

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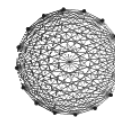
The knock on my door was faint and I could barely hear it. A short person entered. White, male, lazy beard, thick glasses, a lab coat.

"What would you like to drink?" I asked. He nodded, nothing. Just keep my theory alive.

I opened my EverNote and started writing down. I knew it had to be serious. People, animals, artifacts–these can be saved. But theories? This was much harder. "Someone is trying to kill my theory," the old person continued, and I listened to his story.

"Thirty years ago I developed a theory about distance learning," he said. "I emphasized the need to maintain a learning community and not to settle for lectures. I suggested way to foster interaction. People loved it. It showed that distance education can work. I thought that we changed education forever. "But now, all this is about to be lost. Someone is trying to kill my theory. There is a new generation of computer scientists who build online environments. They do video, some multiple-choice questions, and call this MOOC. They think that this is education. They clearly know nothing about how people learn. They clearly do not know my theory. "I need to find their data and prove them wrong. I need to understand how they measure learning and show that there are better ways. I need to replicate their study and then offer a better alternative. The world needs to know about this. " And then he collapsed into the chair. "Do not worry," I assured him. "We will find their data and apply your theory. It will be saved. "

First thing I opened my iPad. "Siri," I called my assistant, "call Google Scholar in." Scholar came and looked messy and scattered as always. I learned to live with that. She had a fantastic memory. Mrs. Scholar, please search for a paper about a MOOC. She left and returned within 350 milliseconds, carrying 713 thick folders, each of which with thousands of papers. "What did you find," I asked, and she replied, "**information overload**".

I started going over the folders. After three-and-a-half days and thirty-seven cups of coffee I found what I wanted. Google, please bring me the full paper. "I can't," she whispered. I looked at her glasses and saw the reflection of some words. "**restricted access**", it said. "Pay 40 dollars for the full article."

I realized that I had no choice and paid. I did not ask for the receipt. Rookie mistake, but at least I now had the full paper in my hands.

I skimmed the introduction and background sections. I looked for a theoretical framework and found none. "The crooks!" I shouted, and slammed the keyboard. How can they write a paper with no **theoretical framework**? These academics sure like to reinvent the wheel. Apparently they published in a computer science journal and their reviewers did not care about it, or where not knowledgeable enough, or whatever.

I found the author on the white pages and called him. He answered, and for moments, seemed very cooperative. This evaporated as soon as he heard who my client was. "This old dude, no one cares about him," he said. "The editor asked me for fewer citations before 2010 so he did not make the cut. Too bad," he said, and laughed.

"But he is right!" I exclaimed. "You know that he is right. You know that your platform is limited, that learning requires interaction and active learning."

The author replied, "I don't care. I have a system to prove useful. Isn't that the purpose of research, to show that we are right?" I hung up. Another severe case of **confirmation bias**.

I tried to read his paper nonetheless, but the language was way too challenging. Connectionism, constructionism, constructivism. These all sounded the same to me. Argh, **tacit knowledge**. I should have anticipated that. I had no alternative but calling in the Grad Students: An army of intelligent mice who work for pizzas. Best deal ever, as long as labor unions do not find me. They came back to me with answers. Good, progress.

The description of the study on the paper was extremely limited. It did not include the instructional materials or the tests. **Copyright**, we meet again. This time I will win.

There were breadcrumbs that I could follow. Two test items were given. Yes, more progress. We can replicate that study and show that we can do better than the original paper.

I called in my client. He looked at me and simply asked, "Who was the population?"

"What do you mean?" I said, "52% women".

"Yes, but..." he continued, "Were they hungry? What time of day did the study take place in? What day of the week?" I knew exactly what he meant: 9 a.m. is not like 4 p.m.; Monday is not Friday. Alas, **never documented**. In fact, perhaps he ran the study 100 times and only got this answer once. We will never know. No one publishes the **null results**.

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I visited the theory at the hospital. It was in dire condition. I apologized. It died. In the background I could imagine the computer scientist laughing. "Who needs theories? We have cornered the mar-

ket!...."