

The Past, Present and Future of Human Communication and Technology Research

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Somehow I got assigned to create a faculty bulletin board, with photos of each faculty member along with answers to several questions students had asked. Someone started on it about two years before, but there were photos and quotes from only about a third of the faculty. This seemed unnecessarily tacky – just who were the rest of the faculty, and why weren't they included? So, the Chair of the department, wisely realizing no one but me really cared, told the faculty during one meeting that I was now in charge of completing the board, and I had authority to harass them for photos and a short interview. That was actually fun, as I got to spend some time with old and new faculty, learned how to use my new little digital camera and transfer the photo files to a CD, and get them printed through online ordering. After I finished the faculty bulletin board (using all my high-level skills of formatting, using colored paper, and stapling, but also reducing a bit the potential of my doing further harm to the discipline or my university through writing or analysis), two faculty asked if I could use a different photo (the current photos were too old or too accurate to avoid being unflattering...but at least they noticed the board was done), meaning I needed to get just two photos printed. So I decided to use one of the self-serve kiosks in a nearby drugstore – always on a mission to force myself to learn about new technology. Well, that should have been several warning signs right there: a simple task, intended to help others, motivated by the potential for learning.

I had been using a nice USB 1Megabyte flash memory drive for carting around files, so after cropping and adjusting the photos using the standard Microsoft Picture Manager (nothing fancy for me!) I copied the two photos onto the USB drive. I went to the pharmacy, and, as it was early in the day, all the kiosks were free and the person behind the photo counter had only one customer. I sat down by the one for self-service, individual prints – not the large-volume kiosks that sent the orders to the photo processing department for later pickup – as I only needed two, and they didn't have to be perfect, and I didn't want to wait to get the bulletin board finished.

The kiosk was a marvel of potential openness to the world of digital data – there was an input/drive/port for every imaginable data device, including several I had never heard of. These were all included in a lovely yellow and blue cover for the monitor and computer and photo processor – that is, it was clearly designed to be an all-purpose, completely integrated system. But, it included a USB drive, so that's all I needed. The touch-screen came up, asking me to select what kinds of photos and output I wanted; I selected the simple "prints." It then showed a screen with several input devices, asking me to choose which one I was using. I had the USB drive in the USB port, and the light was on, indicating it was a live connection. HOWEVER. The screen displayed only four choices (such as CD or photo memory card) – not including the USB drive. Even

though the integrated inputs included it and even though apparently the computer itself recognized the USB drive. There was no way to use the screen interface to select the USB drive. Strange.

I waited until the photo department person was free and asked about this. After a fair amount of looking at exactly the same things I was looking at, she told me that it doesn't accept those things. Ah! I said. Ah!

BUT, as she was nice and wanted to be helpful, she said I could use the bulk processing kiosk, as there was no other customers waiting and she could just process the two photos immediately. This was great, especially as she realized, given the current lack of demands on her time, that this was a work-around, and would allow her to provide helpful service. However, the fact that the first kiosk was strangely not actually integrated, and actually misled users, was now forgotten, possibly to happen again and again.

So she goes back to the counter, I sit down at the more powerful, even better kiosk. Curiously, it had fewer input drives/ports but did include the USB drive. And the display screen did offer the USB drive option. And the USB drive was alive with its little yellow glow at the end, like a firefly trying to attract a mate or some attention, or just enjoying glowing. The screen even had a very nice animation showing just exactly how to move the USB drive into the port, in case I was thinking of cramming it into the floppy disk drive. BUT...no matter how many times I followed this exquisitely clear movement, it never registered the existence of the USB drive – it kept telling me to insert the USB drive ... just so. I did it many times. I'm not sure anyone watching me would have approved such obsessive attempts to just connect.

So, after waiting until she had no customers, I called the helpful photo department over again. After a fair amount of looking at exactly the same things I was looking at, she told me that it wasn't working. Ah! I said. Ah!

By now I had to go to work. As I actually had to go to a meeting at the university and then teach a class, it's not clear that this was really "work", or that it was more "work" than trying to get the kiosks to submit to my needs. No problem, though, because there was a photocopy store on the other side of campus that I would stop by after my class.

After class, I went to the photocopy store, and in the right corner was a kiosk that looked like it had a USB drive. But it also had a pleasantly hand-written sign on it that it was "temporarily inoperable." Unlike the apparently permanently inoperable kiosks of my recent experience. BUT they had a second kiosk, of even a different type. But this kiosk did NOT take a USB drive. But it did take a diskette. I just happened to have a blank diskette in my briefcase. So I went to the counter and asked the nice person if I could use one of their computers to copy two files from the USB drive to the diskette, so that I could use the diskette in the working kiosk to make two photos, for which I would gladly pay the advertised rate. This, I know, was an unusual request, probably not

included on any in-store advertising, so she courteously asked me a few times to repeat/explain my request. She finally told me that their computer would significantly compress the file, down to just 72 dpi, and that wouldn't make a good photo. All I wanted was to copy the file, and they had a computer right there, but apparently the only way they thought they could handle it would be to process the file through some photo software and then send it on to the diskette.

Okay. Okay. So I walked across campus to my office, copied the two files from my USB drive to my diskette and walked back across campus to the photocopy store and back in front of the temporarily operable kiosk. The kiosk had with a flatbed scanner, so you could scan in photos. But, in my case, I would have to have had printed photos in order to scan them in. But, I didn't have them; but that was okay because I didn't want to scan them in anyway; I just wanted to print them. The point of this small diversion, however, is that the top of the scanner lid showed the size of photos you could make – apparently with the scanner and presumably with the machine in general. One of the sizes was 4x6, which is what I wanted. So I touched the screen, was asked what I wanted to do (just print two simple photos, I whispered, and pressed “prints”), and then it asked me what size photos. It showed that there were four sizes to choose from, including the 4x6 that I needed to match the other photos on the faculty bulletin board. HOWEVER at this time, amazingly, just in time for my kiosk experience, the 4x6 size was shaded out, indicating, I guess, that that size paper was temporarily not available in the photo processing bin. But but but ... the scanner lid showed that 4x6 was once of my choices! Sigh.

I realized that now I had the photo files on my diskette. So I could go back to the local pharmacy and use the self-serve kiosk. I did so, but it was now about 5 p.m., and the drugstore and the photo area was pretty busy. I accidentally first typed “self-serf” kiosk, and though it was a random typo, but I guess it's not a bad way to reveal what's going on here. Anyway, I went through the guided touch screen, selected “prints”, selected “diskette”, and the screen in a very animated way showed me just how to insert the diskette and, amazingly, the two photos came up. Quickly, before anything else happened, I selected “print”.

At this point a screen popped up asking me to enter my print password. I figured perhaps this was something I could make up, and use when paying for them to make sure that no one else could pick up my photos (ever see One Hour Photo?). It allowed me to enter 5 digits, but no matter what I entered, it would just tell me to enter my print password again. I wanted to ask the photo processing person to help, but he (now a different person from the morning) was busy doing what he was paid to do, help customers pay for things. Eventually, after waiting until he was unoccupied, I asked him why the print password thingy wasn't working. He said “592.” I asked him “what?”, and he repeated “592.” So I said, “so I have to get a password from you to submit my print request?” He said “yes.” I asked him how I would have known this. He said “that's me...you have to get the password from me.” Though the screen didn't say this; it just asked me to enter a print password. So I entered 592 and “naturally” it worked just fine.

It said the two photos would print in a few minutes and I would get a receipt to take to the counter to pay for the photos. It printed the first one. Ah, but then. Then the system froze, with a cryptic message saying there was a system management error. There was nothing I could do (as the rest of the day was making very clear), and certainly not in the way of managing this system. I wanted to ask the photo processing person to help, but he (now a different person from the morning) was busy doing what he was paid to do, help customers pay for things. Eventually, after waiting until he was unoccupied, I asked him for help. After a fair amount of looking at exactly the same things I was looking at, in addition to some new screens, he told me that it wasn't working. Ah! I said. Ah! He said that he would have to reboot the computer, it would take some time, did I mind waiting. Um, no of course I didn't mind.

15 minutes later, it finally rebooted. I went through all the screens again, it accepted my diskette, it showed my two prints, I selected "print", it thought about it, whirred, and spit out both photos. They looked great. No receipt. I wanted to ask the photo processing person to help, but she (now yet another different person from the morning and the evening) was busy doing what she was paid to do, help customers pay for things. Eventually, after waiting until she was unoccupied, I asked her for help. After a fair amount of looking at exactly the same things I was looking at, she told me that there was no receipt. Ah! I said. Ah! She took me to the photo processing counter, entered the cost for each photo (3 now, at 29 cents each, with tax, for a total of 94 cents), gave me my three photos in a nice pharmacy photo processing envelope, and my 6 cents change.

The photos look lovely on the bulletin board.

I believe there are many issues here involving traditional and new media (bulletin boards, photos, computers, interfaces, storage media) and organizational communication (emotional labor, task design, expectation management), and intersections between the two (managing conflicting tasks, responsibility for without training about technologies and services, feedback among technology, service providers, customers), and innovation diffusion (perceptions of innovation attributes such as compatibility or trialability, understanding of potential adopter needs, technology clusters). There's actually quite a lot of literature about all these things, within and outside of communication research, such as socio-technical systems, actor-network theory, work design, digital divides, outsourcing, social construction of technology, etc. And many people have similar, and much worse, experiences trying to make their way through the world. So why do these kinds of things persist? Seems like there are very fruitful, theoretically and empirically informed possibilities for communication research here...

Author Biography

Ronald Rice received his B.A. in Literature from Columbia University and his M.A. and Ph.D. in Communication Research from Stanford University. He also has corporate experience in systems and communication analysis, banking operations, data

processing management, publishing, statistical consulting, and high school teaching. Before coming to University of California at Santa Barbara, he was Professor II (Distinguished), and Chair of the Department of Communication, at the School of Communication, Information and Library Studies, Rutgers University, NJ, and Assistant Professor at the University of Southern California, Los Angeles, CA.

He has conducted research and published widely in communication science, public communication campaigns, computer-mediated communication systems, methodology, organizational and management theory, information systems, information science and bibliometrics, and social networks. His publications have won awards as best dissertation from the American Society for Information Science, half a dozen times as best paper from International Communication Association divisions, and twice as best paper from Academy of Management divisions. Dr. Rice has been elected divisional officer in both the ICA and the Academy of Management, and is currently on the ICA Publications Board. He has served as Associate Editor for Human Communication Research, as well as for MIS Quarterly.