Unconscious Fraud of Journalism Education

Computer database skills are essential for serious journalism. Why are J-schools failing us?

BY J. T. JOHNSON

The clue that the future had been made present came through loud and clear in late September 1986 when a couple of hundred freelancers scattered around the world received a letter from the Chicago Tribune.

"Dear Contributor:

"Effective on this date, the Chicago Tribune travel section stopped accepting unsolicited manuscripts that need to be keyboarded into our electronic editing and typesetting system.

"That means, quite simply, that we are not a market for free-lance articles unless they can be sent to us electronically or via a mailed-in IBM-compatible disk," wrote section editor Larry Townsend. He closed the letter: "Welcome to the electronic age!"

Exactly. The Tribune had indeed recognized that a new electronic age for journalism, the beginning of the most significant period of change and opportunity since the introduction of the printed word, was upon us.

The trouble was, the Tribune's editors were off by 25 or 30 years, at least in terms of journalism and other disciplines in the humanities. The electronic age for all the humanities arguably began in 1958 when IBM's Hans Peter Luhn produced an automatic document-indexing program. The electronic age specifically for journalism clearly began in 1967 when Philip E. Meyer used a computer to study survey data drawn from African-Americans who lived in the Detroit neighborhoods hardest hit during the riots that year. Meyer's analysis and the reporting that grew out of it helped the Detroit Free Press win a Pulitzer Prize. (See sidebar, page 32.)

Seven months after the letter from Chicago I found myself the start-up editor of a new weekly newspaper for Macintosh computer users. We hired a staff, equipped the business office and newsroom, and produced the first issue in six weeks. There was only one typewriter in the entire operation. (The publisher's secretary had to type an occasional address label.) Complete publishing, newsgathering, editing, and production functions were conducted electronically from Day One. The promise, the power, and the flexibility of journalism's electronic future were no longer "out there." The Future, we were sure, had become the routine environment.

But now, five years later, it is apparent to me as a journalist and teacher of journalism that Meyer's pioneering work, the Tribune letter, and the pragmatic efficiencies at numerous magazines and newspapers like MacWEEK were nothing but a series of false dawns. None of those
The beginnings:

Detroit Free Press
August 20, 22, 1967.
“Detroit Riots,” in reporting that helped win a Pulitzer prize, Philip E. Meyer introduced the use of a computer to study survey data from riot-area blacks following the 1967 civil rights riots in Detroit. Meyer’s work produced a front-page series titled, “The People Beyond 12th Street.”

New York Times
February 14, 15, 1972.
“Crime Rates.” Reporter David Burnham prepared a two-part series using the paper’s computer to provide evidence of the variation in crime throughout New York City and the ability of different precincts to make arrests. These front-page stories required Burnham to use the Times’ computer to develop rates of reported crime and arrests in each precinct.

Innovative investigations:

Philadelphia Inquirer
“Unequal Justice.” Reporters Donald L. Bartlett and James B. Steele conducted the first comprehensive newspaper computer analysis of a court system. They traced from beginning to end the cases of 1,034 defendants, analyzing more than 10,000 court documents and 500,000 pages of transcripts.

Miami Herald
February 9, 1976.
“Property Tax Inequalities.” Investigative reporters John Camp and Ron Simpson used computers to produce a series on how owners of expensive homes were not paying their proportionate share of property tax in Dade and Broward Counties, Florida.

Dallas Times Herald
December 11, 22, 1983.
“Status of U.S. Education.” Conducted educational tests of 12-year-old students in eight countries to determine the status of U.S. education.

The vast majority of journalism professors — indeed, the vast majority of all university educators — simply have not grasped the magnitude or specifics of the change now extant in information storage, management, and communications, the fundamental components for all teaching and all learning.

I was struck by the depth of the problem in the spring of 1990 when the Indianapolis branch of Indiana University sponsored the nation’s first conference devoted to “computer-assisted reporting.” Four hundred journalists from nearly that many separate organizations signed up before registration was closed for lack of space. Of those 400, less than a dozen indicated they were teachers of the craft. Once in Indianapolis, however, those 10 or 12 pressed Associate Dean James Brown to host a similar conference geared to journalism educators. He agreed, scheduling an unprecedented three-day meeting in Indianapolis for October 1990. In late September Brown called those teachers who had preregistered to tell us the meeting was canceled. For lack of interest. Professor Brown only had to dial the phone 14 times.

The disregard continued. In August 1991, more than 1,600 journalism educators traveled to Boston to present and listen to papers (and sometimes look for jobs) at the annual convention of the Association for Education in Journalism and Mass Communication (AEJMC). Of the 365 papers presented, only 11 related to this new information environment in any fashion. It’s probably not surprising then that when Professor John McClelland of Roosevelt University appeared on a panel headlined “Computer Instruction in Journalism,” the audience of nine barely outnumbered the panelists. Maybe it was because the panel was scheduled for 7 p.m. on a Friday; the third night of the four-day conference, McClelland later told me. We were talking on the phone; I couldn’t tell if he was whistling in the dark.

In the late 1970s, enough schools were able to install computerized typesetting equipment that the first stages of debate could begin about whether or not journalism faculties should even be teaching what was then called “computer skills.” In fact, the professors were only talking about writing and editing on video display terminals — “computer skills” in the narrowest sense.

By the time University of Texas grad student Jack Nolan conducted a survey in September 1987, he found 81 percent of 271 responding institutions “had adopted computers for teaching journalistic writing.” Of the 51 schools that did not have computers, all but two respondents said they “would like to adopt computers but were unable to because of lack of funds.” But only 13 percent of Nolan’s respondents who had computers claimed to be using them for much beyond writing, or word processing, and page design and production.

A few schools

There are some pockets of hope to be found in a few journalism departments around the nation that are pressing to include computer-based information analysis in various ways. Since the early 1980s, the University of Minnesota has required a one- quarter course on information search and retrieval for all journalism majors.

The Graduate School of Journalism at Columbia University has been offering an intensive course in computer-assisted reporting — covering data bases and the fundamentals of quantitative analysis and polling — since 1988, and a variety of electronic analysis tools are smoothly integrated in courses across that school’s curriculum.

Indiana University’s journalism program (primarily the Indianapolis campus), the University of Missouri, the University of Florida, Syracuse University, Northwestern,
Arizona State University, University of Oregon, Michigan State University, and the University of Texas all have a few faculty members interested in the subject. These teachers, having invested the time and effort to learn how to harness the analytic power of computers, are trying to pass along these new ways of seeing and understanding.

But it is rare to find a department where more than 20 percent of the faculty can use a computer for anything more sophisticated than word processing. And I have been unable to find a department that has established something that might be called an “Information Tools and Analysis” course for freshmen. Such a course could teach them skills that would be invaluable for their entire university and professional career.

— J.T. Johnson

Am I overemphasizing the importance of computer retrieval and informational analysis skills? Consider:

- The “paper trails” once left by government or corporate activities are disappearing.
- Quite simply, the effluence of bureaucracy long-treasured by journalists has begun to gather dust, replaced by electronic bits and bytes. More corporations and individuals, for example, are filing tax returns electronically. SEC documents are dumped straight into mainframes, along with annual reports available to the public. Furthermore, the information warehoused by government and corporations has become so bountiful that a computer is the only way to locate and sift through it all. As early as 1985, nearly 97 percent of all cities in America were using computers of some type to store information that belongs to the public.
- Only those journalists who can follow the “electronic trail” will survive and prosper.
- Online information has reached a critical mass: the amount of stored information makes electronic searching not a novelty for esoterics but a pro forma resource for all journalists, students, and educators.

Anthony Smith, a scholar of information technology, has written: “By the turn of the 20th century there were around 10,000 [scientific] journals, and by the middle of the century that number had grown to 50,000. By the start of the present decade [1980s] the number had doubled again to 100,000 and was growing by several percentage points a year. In volume rather than number of titles, it was probably growing even faster.”

Today, essentially all major and many minor academic journals in English, German, and Russian — and many in French, Spanish, and Japanese — published since 1985 are available electronically and can be examined without leaving one’s desk.

In 1989, approximately 900 information vendors had 4.9 billion citations available on-line, everything from yesterday’s sports scores to Japanese patents, from the transcript of the Robert Bork hearings to historic oil prices.

Especially important for the traditional journalist are the more than 100 U.S. newspapers available electronically, along with nearly 1,000 magazines and trade journals. A similar service based in Monterey, Mexico is electronically banking the stories of the major newspapers in Latin America. Another vendor provides the full text of British publications, and others cover the rest of Europe. This information makes possible what online specialists call “cross-border searches,” tracking the burgeoning international business world of companies like BCCI as easily as uncovering domestic information.

- Costs of periodical subscriptions and books are increasing (especially because of paper and distribution costs), while the electronic information cost curve is on a steep downslope.

The cost curve favors — and in many cases, demands — electronic access to libraries. Between 1980 and 1990, the average magazine subscription price increased 62 percent, from $16.75 to $27.11. In 1977, the average hardback book was $19.22. By 1990, $39.90, a 108 percent increase. Public and private libraries are especially hard hit if they subscribe to any specialized journals. In 1990, the average subscription price for such periodicals was $93.45. In 1991, the average serial subscription was $104.36 — up 11.7 percent in just a year.

But my bill for Genie, an electronic information service that gives me access to 10 U.S. and international wire services on News Grid, encyclopedias, electronic mail, and a host of additional information sources, dropped in 1991 from $6 per hour to $5 per month for unlimited usage of these information tools. Other similar services have comparable prices: CompuServe costs only $2 per month for basic services, plus $12.50 an hour for additional services;Prodigy charges $12.95 per month, plus usage charges that vary with selected special services; and America Online costs $7.95 a month plus about 10 cents per minute for services after an initial free hour.

Vendors are anxious to deal with universities. Vu/Text, a division of Knight-Ridder that electronically supplies the full texts of stories from more than 75 newspapers, began in 1990 offering an educational rate to teachers and students by the middle of the century that
Atlanta area. Bill Dedman won the 1989 Pulitzer Prize for investigative reporting for this series, "The Color of Money."

**USA Today**


**Syracuse Herald Journal**


"Health Care Inequities." An investigative team lead by Cheryl Imelda Smith and Barry Katz used a mainframe computer to analyze more than 8 million public records on magnetic tape to uncover inequities in the health care industry in the Syracuse area.

**USA Today**

July 31-August 2, 1989.

"Toxic Waste Disposal." Analyzed EPA records - equal to more than 80 million words - available on magnetic computer tape, to produce this series on toxic waste. The analysis enabled the paper to determine communities' preparedness in the event of a toxic chemical accident.

**Minneapolis Star/Tribune**

February 4, 1990.

"Minnesota Gambling Laws." Led by Joe Rigert and Robert Franklin, the paper produced an investigative series on the state's beleaguered gambling laws using computer-assisted investigative reporting.


... of $15 per hour for full access, 24-hours a day. In the spring of 1991, Lexis/Nexis started a low-cost, flat fee system for universities.

- The print media are barely able to report the breaking news — CNN, C-Span, and all-news radio do that.

- If they are to succeed — or, perhaps, survive — the print media must compete by offering readers more interpretation. That demands reporters and editors who can quickly define, locate, and acquire historic information on any topic as well as find contemporary information on the same topic that is scattered around the state, nation, or world.

- Once that information is collected, the reporters and editors need to know how to analyze that data in terms of their historical context and to look for patterns of events and deviations from those patterns. And those are precisely the tasks that can use the strength of computers.

(These concerns apply, of course, to broadcast as well as the print media. As ABC News correspondent Jeff Greenfield writes in a forthcoming book titled "Demystifying Media Technology": "When a story breaks during the day and Nightline changes its show... when a whole new show has to be constructed within six hours, what happens could not be imagined absent very recent changes in technology. Within minutes, the researchers are on-line to Nexis and are beginning to get background material so that most of us who are not experts in their field at least get some sense of what the debate is about. ABC's News Information Service is on-line to dozens of data bases and is plunging its way through the past and analytical pieces and background reports and technical reports.")

- Reporters, editors, and publications — should they be the defendant in a libel suit — may have to prove they practiced "due diligence" in researching a story by all means possible before publishing the story at issue.

The time is coming when proving due diligence may mean establishing that a complete search was made of all possible databases to ferret out a possible reversal of a criminal case or the expunging of someone's record or a pardon. I can imagine a prosecutor in a libel case demanding that the accused reporter explain why he didn't search a particular database for information that may have exonerated the plaintiff or established the inevitable tsunami of bits and bytes.

That means that knowing how to tap the information banks would not be a matter of simply improving the quality of stories, it would be a matter of legal, and possibly economic, survival.

Fortunately, such incidents are unlikely events in the lives of most reporters. What is more likely is that a reporter would need to know the status of a law or ordinance, and it is in this area that electronic information banks prove their value.

Federal laws, for example, are printed and bound in the volumes of U.S. Codes. But laws are amended, sometimes in the year following their passage. If a reporter researched the law library manually, he or she would find the amendments in an envelope in the back of the volume. (Updated, bound volumes with the amendments included are usually published annually, but sometimes less often.) If the reporter used a computer, however, he or she would find the amendments already blended into the statute.

So what's to be done? By the end of their first semester in the university, all students should know how to use a computer and modem to "log on" to an electronic data base and find information — both text and quantitative data. They should then be taught how to organize and analyze that information with a variety of task-specific tools: software "utilities" that simply make it easier and less stressful to use a computer, spreadsheets, elementary statistical packages and simple databases with "sort," "count," "sum," and "average" functions. The students also should be trained how to use their analyses and word processor to write an acceptable paper or report, one free of spelling and grammatical errors and handsomely presented.

These are fundamental skills; it is possible to teach them in a semester. The key to learning and attaining high-level skills, however, is repetition and reinforcement of these early lessons. That requires that every teacher of every course that calls for research, data retrieval, data analysis, and/or writing must know enough about these skills to raise the ante of expectations for the students, pushing them to excel in these analytic and communications techniques.

We must prepare ourselves for this teaching task by, first, understanding that "computer literacy" offers — and demands — much more than neat correspondence from a laser printer. Secondly, we must learn enough about the fundamentals of electronic information management and analysis so that we can use these tools in our own work as journalists, scholars, and teachers.

Then we must — as should every professor in any discipline — put that knowledge into play in the classroom so students and generations of future journalists will be able to navigate through the inevitable tsunami of bits and bytes.

If we do less we are acting like all the drive-in theater owners in the late 1970s who continued to blithely sell tickets and popcorn while the nation was buying VCRs and stringing wire for cable TV. And I don't know any professors of journalism whose career goals include promoting swap meets and managing flea markets.

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