Accepting the ASIS&T 2015 Award of Merit

by Michael E. D. Koenig

EDITOR'S SUMMARY

In receiving the ASIS&T Award of Merit for 2015, Michael E. D. Koenig recognized his many collaborators, mentors and those who have stimulated his thinking on numerous topics in information science. Koenig reflected on his wide-ranging past studies, weaving through bibliometrics, information systems, library automation and education for library and information science. Koenig adapted citation analysis to develop a metric for pharmaceutical R&D demonstrating that citation data is a valid measure of research impact, and he has written extensively on the connection between an organization's information services and its productivity. In Koenig's view, knowledge management is the effort to build an information environment within an organization that supports its research effectiveness; it is a key contributor to organizational impact. Koenig hopes to see knowledge management, rooted in a strong information environment, serve as a catalyst for impact.

KEYWORDS

honors
scholars
information science history
knowledge management
organizational culture
organization productivity
information impact

I am of course deeply honored and pleased to receive this award. It means a great deal to me. ASIS&T has been my principal professional home for almost half a century. My first ASIS&T conference was in Columbus, Ohio, in the late 1960s.

ASIS&T has contributed almost all of the people with whom I have collaborated and to whom I owe a great deal of thanks: Henry Small, Claire McInerney, Kanti Srikantaiah, Marianne Broadbent, Thomas Krichel and Charles Hildreth. A great deal of appreciation is also due to those who have mentored me, both in the classic sense (Gene Garfield, Belver Griffith and Maurice Line) as well as some near contemporaries who have also filled that role, such as Marjorie Hlava and Henry Small. But those who have served as sparring partners should also be mentioned: Wilf Lancaster, Gerry Salton, Mike Buckland and Tom Wilson. Our exchanges have been very useful for me, and I hope for them – it forces one to assess assumptions and arguments. It may be worth observing that three of these people are past Award of Merit winners and the fourth probably should be.

My work has been rather eclectic – from file design for chemical sub-structure searching to "The Toy Theory of Western History." There are, however, a number of somewhat consistent themes throughout:

Michael E.D. Koenig is the recipient of the 2015 ASIS&T Award of Merit. Koenig has worked extensively both in academia and in the private sector, providing an example of a member who has successfully contributed in both areas. He has published over 100 professional publications even though he has not been a career professor; instead he has spent more than 2/3 of his 40-year career as a fulltime executive. His research areas have benefited from that combined experience and provide compelling research within knowledge management, especially on the positive impact of information services on research productivity. He was also the creator and founding dean of one of the first iSchools – the College of Information and Computer Science at Long Island University (2001). He is the author of a record four chapters in the *Annual Review of Information Science and Technology* (*ARIST*), co-editor of three ASIS&T monographs (on the subject of knowledge management) and a past president of the International Society for Scientometrics and Informetrics.

- Bibliometrics, hence my presidency of ISSI, the International Society for Scientometrics and Informetrics
- Library automation, particularly serials processing
- Integration of information systems development hypotheses, namely those of Nolan, Rockart, Gibson & Jackson, Koenig, Marchand and Zachman
- The history of printing, specifically the work of Theodore Low DeVinne, both an eminent printer and eminent historian of printing
- Budgeting and financial management of information services
- Education for LIS

There is one major theme, however, and one that is particularly salient to this meeting, as it leads directly to the theme of this meeting: the effect of the information environment and information services of an organization upon its productivity.

This theme branched off from bibliometrics. In the 1970s when bibliometrics became functionally feasible due to the development of the *Science Citation Index*, there was substantial pushback as to how meaningful citation analysis really was – was it really a measure of anything more than just reputation? To address this issue, I constructed a metric for pharmaceutical R&D, an industry where the slogan is "the NDA (new drug application) is the name of the game." The metric was new drugs per research dollar, with the new drug count refined by whether the FDA had categorized the NDA as an "important" therapeutic advance, whether De Haen had categorized the NDA as "chemically novel" and whether the patent was in the NDA applicant's name. This metric was compared with expert opinion scores about which pharmaceutical companies were doing good research (using an NIH expert advisory panel as the source of the opinions). The bibliometric data correlated with performance data better than expert opinion did. Furthermore the best predictor of expert opinion was not the performance data or how much a company's research had been cited, but simply how much it published. This finding was the first convincing quantitative evidence that citation data had real merit as a measure of impact.

I don't have diplomas and similar items framed and hung on my office wall, but I do have one such item, a congratulatory letter from Derek Price that he wrote when that work appeared in *JASIST*.

With a good metric of research performance, the next logical step was to try to elucidate what led to high research performance: What were the characteristics of the information environments in the high performing organizations? To summarize, they were rich, deep and open communications. If I were to be remembered for only one factoid it would be that the strongest correlation found to high research performance was the response to the question, "How would you compare your organization's emphasis upon protecting the confidentiality of your organization's proprietary information with that of other companies in the industry?" And the correlation was negative: the more an organization emphasized protecting the confidentiality of the organization's proprietary information, the less effective that organization's research efforts were.

That finding led to an examination, deriving from a request for a chapter in *ARIST*, of the subject of the relationship between information services and the productivity of the organization. What I thought would be a comparatively brief review chapter became a rather lengthy one. However it developed into not just a review chapter, but also a discovery chapter. It revealed two important things. First, the literature was very scattered: in LIS, in general management, in engineering and engineering management and in research policy and elsewhere. Moreover, the literatures were rather unconnected; however, very importantly, the overall literature was far more extensive than had been realized, Secondly, and also very importantly, it revealed that the literature was remarkably consistent in emphasizing the importance of rich, deep and open communications.

That interest in the subject of the relationship between information services and the productivity of the organization led to more work, and it also morphed quite logically into an emphasis upon KM, knowledge management, where the bulk of my recent work has been centered. At this point I would like to emphasize the conversations and interactions with Kanti Srikantaiah that I enjoyed as a catalyst for that morphing.

There are numerous definitions for KM; Michael Sutton reported at an ICKM (International Conference on Knowledge Management) conference a few years ago that he had assembled a compilation of over 100 of them. There is one however that I particularly like. It follows logically from the observations that those who are most obviously knowledge workers are scientific researchers, and that, as Peter Drucker most famously (as well as many others) has pointed out, we are becoming societies of knowledge workers. The definition that follows, then, is that KM is the movement to create in the organization at-large the information environment that has been demonstrated to be conducive to research effectiveness.

I like this definition of KM for several reasons. The first, somewhat egotistically, is that it is my definition. The second reason is that it is not just descriptive, but more importantly, that it is suggestive. If for example, the research indicates that in the pharmaceutical industry the more egalitarian the research environment, the more effective the research accomplished, what does that imply about what the information environment for the organization at-large should look like?

The third reason is that it leads so directly to the theme and the emphasis of this conference and to the future direction of ASIS&T. If the principal thread of my work has been the relationship between the information environment and information services on the one hand and the productivity and the effectiveness of the organization on the other, in the interest of brevity it might be reduced to two words: “organizational effectiveness." And if one were to further reduce it to only one word, that best word is probably “impact.”

Looking at the program for this conference, I am struck that the word that would jump out is *impact*. The key phrase in Given's introduction to the conference on the first day was *societal impact*, the key word in Morton's plenary on the second day was *impact* and the first word describing day three was *impact*. And the second most prominent term would, as appropriate, be *knowledge management*.

I would like to close with the suggestion that, as we think about how to pursue the target of "impact" and about the future direction of ASIS&T, my favored definition of KM could serve as a very useful catalyst, and I hope it will.

And of course I would like to close by thanking ASIS&T and its members for giving me this honor. ■