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Selling Taxonomy: a Fool's Errand?

How do corporate taxonomists “sell” business unit managers, senior executives, and authors on the value of what they do? When we submitted this question to our contact list, we got two kinds of responses. Some people contributed anecdotes, personal experiences, and lists of taxonomy benefits. Others thought the question was either impossible to answer or shouldn't have been asked in the first place. What's going on here?

To explain these divergent views, we look at the issue of taxonomy value from two perspectives — corporate IT and commercial publishing. From the IT perspective, taxonomies enhance the capabilities of intranets, search engines, and content management systems. From the commercial publishing perspective, they increase revenues by making information products more “user-friendly.”

By focusing on technology, the IT perspective makes it difficult to “sell” taxonomy benefits. By focusing on information products, the commercial publishing perspective makes it possible to assign a dollar value to the whole package, in which taxonomy plays a part. Neither perspective, however, gives enough emphasis to how people actually use information — the key to productivity and business value.

Part I of this article analyzes the issue from both perspectives. Part II summarizes the responses we received.

PART I: Synthesizing two perspectives

IT perspective

From the IT perspective, electronic business taxonomies evolved in the following sequence:

1. *Businesses get connected to the Internet.* Departmental staff with little or no training in electronic information procurement and retrieval now have access to a huge smorgasbord of internal and external information.

2. *Departments install Web servers.* Departmental staff with little or no training in publishing, editing, or promotion are now producing electronic publications that are available to a wider, more diverse audience.

3. *Organizations install search engines.* IT staff install search engines to help people find information in these huge, dynamic collections.

4. *Organizations create a taxonomy.* Users complain that they still can't find things and spend too much time sorting through irrelevant search results. IT staff add taxonomies to give them an alternate retrieval method and improve search engine effectiveness.

5. *Users still aren't happy.* Companies discover that one classification scheme isn't enough. “Dirty” content undermines search efficiency.

At this point, things get sticky. How do we convince authors to apply the taxonomy when they create new documents? Who should pay for categorizing thousands of existing documents? How do we get the funding to harmonize and integrate multiple specialized taxonomies?

There are no easy answers.

Commercial publishing perspective

The publishing industry has been creating taxonomies since the printing press was invented. Taxonomy components are called indexes, classification schemes, thesauri, and tables of contents.

Why don't publishing industry taxonomists worry about selling taxonomies? Because everyone knows that taxonomies help sell more products and make more money for the publisher.

But not all information products are alike. Not every book has an A - Z index, for example. Exceptions include magazine issues, pamphlets, some school yearbooks, and novels. Taxonomy value depends on consumer needs. University students are willing to spend hefty sums on textbooks (with indexes) and pay tuition (which helps fund the campus library) in order to get a credential that

will help them earn more money. Businesses are willing to spend thousands of dollars each year for access to commercial bibliographic databases, whose primary value added is metadata and a mechanism for compensating publishers for downloaded articles.

Commercial publishers don't need to sell the taxonomy concept because the market allocates a value to their end product. As long as publishers sell enough end products, they can afford the cost of the taxonomy. The key is knowing when — and how — to use taxonomies for the greatest return. Publishers know that textbooks, reference books, and how-to manuals won't sell very well without an index. On the other hand, an index probably won't create additional sales for a novel.

Furthermore, publishers know that different packaging for different market segments increases sales. Some textbooks, for example, have a "teacher's edition" with additional material, and librarians can buy a "library edition" with a stronger binding.

Who pays?

In commercial publishing, the cost of creating taxonomies is borne by 4 groups:

1. *Consumers.* The cost of producing the A - Z index and table of contents is embedded in the price they pay for the book.

2. *Publishers.* The cost of contributing metadata to government agencies and commercial distributors is treated as an overhead item.

3. *Taxpayers.* The cost of creating metadata standards and providing services such as copyright registration and the Catalog-in-Publication system is paid by taxpayers to facilitate commerce in intellectual assets.

4. *Individuals.* Through their involvement in professional and industry associations, volunteers contribute their time to create, refine, and test publishing metadata and taxonomy maintenance systems.

The key point is that taxonomy funding comes from a combination of sources, each with its own self interest

in participating. Corporations, large not-for-profits, and government agencies need to participate in existing collaborative efforts and help create new initiatives that address their specific needs.

Addressing the needs of corporate departmental publishers

Commercial publishing is based on the print medium. Electronic products — e.g. directories, bibliographic databases, publishers's catalogs, and magazine Web sites — are mostly surrogates for the printed product.

The Internet changed the basic concept of "book," but commercial and corporate publishing has been slow to adapt. This is why it's still so rare to buy books that come with a companion Web site and links to footnoted material, and why Amazon.com's "Search-the-book" feature is so revolutionary. It's also why few corporate departmental publishers use the advanced features of the PDF format, such as live links, table of contents, and security.

A "book" can now be a dynamic collection of original writing, snippets of text owned by another publisher, reader comments, magazine reviews, and even custom searches. More important, readers in a business environment expect to interact with a work. For example, they expect to:

- annotate text;
- e-mail a segment to a colleague or customer;
- follow footnotes and read cited articles online;
- download metadata into a personal or departmental library;
- combine published statistics with internal statistics and analyze the result;
- obtain permission to republish a drawing;
- search for related material on the corporate intranet, departmental server, or laptop.

This is where productivity can be measured, and value is added to the bottom line.

Adapting the commercial publishing paradigm

To deal with the issue of value, corporate department publishers need to adapt the commercial publishing paradigm to this new environment. This means:

1. *Establish a market mechanism.*

This could mean a charge-back system (perhaps using an internal "credit card"), charging a fee to external users, or simply tracking and reporting the number of "subscribers." Charges are needed both for the end product (e.g. a report) as well as production services (e.g. indexing and abstracting).

2. *Look for indirect "customers."* The "end user" is not always the customer for taxonomy services. For example, the value of the user manual lies in increased productivity for the person who buys the product. For the corporate customer service department, a good user manual can reduce support costs. For the marketing department, it can build customer loyalty and contribute to referral sales. For the user manual publisher, it may be easier to measure the impact on support costs than it is to measure the end user's productivity.

3. *Focus on the business objective.* Taxonomies play a key role in helping R&D staff focus their effort on high-potential projects, sales staff close complex deals, customer service staff find solutions to unusual customer problems. In all these situations, the value can be quantified.

3. *Segment the market.* If your group "owns" a certain type of information, offer different "editions" for different "markets." For example, one of our course participants contracted with an internal client to produce a taxonomy for a Web site devoted to cultural attractions. She realized that the Web site had at least two important audiences:

a. *Conservationists* — the people who conserve historic structures, natural wonders, and cultural practices.

b. *Tourists* — the people interested in viewing historic buildings, visiting natural wonders, and attending cultural events.

Much of the content was the same, but it needed to be presented differently — not only in terms of the organization scheme but also in terms of how Web site visitors interacted with the information. Each group has a different way of calculating the value of its Web site.

4. *Create an infrastructure.* Once corporate publishers get a handle on their customers, markets, costs and “revenues,” they will be motivated to reduce costs through cooperative development in the same way that commercial publishers do. The infrastructure can’t be a one-size-fits-all monolith that omits key features needed by some publishers and imposes the costs of unnecessary features on others. Taxonomy tools and services should be “pulled” by corporate publishers, not “pushed” by IT.

The infrastructure should be a hybrid system where certain functions are performed by a the corporate information function, some are performed through external agencies, and others are performed by local business units, teams, or individuals. We’re making progress on the first two components through “open” architectures and metadata standards, but we have a long way to go in giving local publishers the tools and skills to increase their productivity as information consumers and enhance the value of the information products they produce.

5. *Make someone responsible for gaps.* Focusing on applications, business objectives, and reader productivity instead of content, technology, and the anonymous “user” puts the responsibility for measuring value in the right place. But it doesn’t solve the whole problem because growth opportunities often arise outside the boundaries of existing functions, processes, or markets. Bowker and Star, authors of the book *Sorting Things Out*, say it well:

“We need to consistently explore what is left dark by our current classifications (‘other’ categories) and design classification systems that do not foreclose on rearrangements suggested by new forms of social and natural knowledge.”

Experts on innovation all agree on the importance of thinking “outside the box,” creating “porous boundaries,” and promoting creative destruction. Categorization is critical to these processes because it allows managers to see the environment in new ways. Taxonomists can help with the process, but they can’t “own” it. It is important to show the champions, strategists, boundary-spanners, and innovators responsible for generating new ideas how categorization tools and techniques can make their job easier.

PART II: Summary of responses

We received nine meaningful responses, summarized below.

Anecdotes

This anecdote, contributed by one of our respondents, involves retail sales:

Response #1

A Midwest grocery chain used the data mining capacity of Oracle software to analyze local buying patterns. They discovered that when men bought diapers on Thursdays and Saturdays, they also tended to buy beer. Further analysis showed that these shoppers typically did their weekly grocery shopping on Saturdays. On Thursdays, however, they only bought a few items. The retailer concluded that they purchased the beer to have it available for the upcoming weekend. The grocery chain could use this newly discovered information in various ways to increase revenue. For example, they could move the beer display closer to the diaper display. And, they could make sure beer and diapers were sold at full price on Thursdays.

Anecdotes are entertaining and help take the mystery out of the topic, but they are of little use in understanding the complexities of taxonomies in the corporate environment and developing a roadmap for development.

Applications, experiences, and suggestions

Respondents mentioned three kinds of taxonomy applications:

1. Standardizing products, names,

and definitions

2. Improving Web site navigation
3. Producing consistent reports

1. Standardizing products and services

The following two responses show the importance of standardizing product names — a key part of taxonomy development.

Response #2

Originally, our taxonomy was to serve as a controlled vocabulary for a new content management system. However, we discovered that there was no official list of products and services for the company. After we circulated a preliminary list, executives began to discuss how to portray the company’s products and decided they needed to look at how the products were being marketed — something that had never been done holistically.

Response #3

Over the 5 years, our top 5 business drivers have been:

1. *Product and product-related names* — generally, anything that produces revenue and /or has an sku number. Support needs have driven the specificity down to the patch and fix level, so service packs (which we don’t charge for) are included. The primary drivers are constancy of name forms and conformity to legal, marketing, sales, and product group requirements.

2. *Geopolitical names* — alignment with nationally and culturally acceptable and permissible values. The requirements from a business-oriented political correctness are more constrained than from a general language perspective. For example, the Peoples’ Republic of China is very sensitive about any references to Taiwan.

3. *Organization and business unit names* — market research, competitor information research, and similar efforts use these for faster,

more comprehensive, and more accurate access to market research reports, competitor and competitive information. That includes externally-generated information from commercial services, as well as internally created reports. Part of the taxonomy work is mapping terminology from various sources and user groups. It boils down to an information access and retrieval driver but for a specific audience and content set.

3. *Language names* — this is similar to the geopolitical names requirements, with the addition that we do business in many languages and our products are available in many languages and scripts. Consistent and accurate use of language names and scripts is essential to helping customers understand how to use our products.

4. *Glossary* — in some respects, this is not taxonomy work at all (in the sense I define taxonomy, which means terminology structured according to particular principles and practices). But it's critical to taxonomy work. Taxonomies are built of individual terms and understanding the semantics of them is essential. The driver is the need for employees at all levels to have access to accurate, consistent, and comprehensive information about the meaning and use of terminology at the single term level.

2. Improving Web site navigation

Many taxonomies are produced to reduce the time it takes to find information on a Web site or intranet.

Response #4

1) Saves time retrieving relevant information. This improves Business Response Rate and thus ROI.

2) Promotes discovery of related information. This translates into spontaneous added value, similar to browsing library bookshelves, when you're looking for one book and discover others on the same topic.

3) Provides a usable browsing interface to technical content [a table of contents].

4) Retrieves documents about the desired concept. Just because a word appears in a document, it does not mean that the document is about that word.

5) Provides context to a search, giving more precise results — e.g. Filters (Signal Processing) vs. Filters (Biochemistry).

6) Facilitates navigation from institution-specific terms to “standard” concepts and vice versa.

7) Manages use of synonyms and acronyms.

8) Improves search engine performance by using consistent metadata.

A related argument is to increase sales by making the online purchasing experience faster and more efficient for customers.

Response #5

One big benefit is the ability cross-sell, or in non-commerce environments, to simply cross-link. More companies are investing into content modeling (aka ontology development) to achieve such benefits.

3. Producing consistent reports

Taxonomies are also essential in producing consistent, accurate reports. An example is the XBRL taxonomy for financial reporting. The more kinds of organizations use a report, the greater value added by the taxonomy. When readers use different terms for similar concepts (e.g. British English vs. American English), speak different languages (e.g. French, German), and aggregate data in different ways, taxonomies are essential for resolving language variations and harmonizing data for “apples-to-apples” comparisons.

Response #6

We are constantly introducing new program activities, initiatives, and

campaigns. We are hoping taxonomy will help us face the challenge of keeping everyone using the same nomenclature.

The consistency factor is not to be underrated as we are congressionally mandated to keep an archive. We also have a museum. The archive and museum have some structure, but they are not necessarily part of the larger organization. Also, those two groups tend to be the last ones to touch information. Again, we hope the taxonomy will help us [integrate their activities].

Doubters: a blind alley?

Three respondents were pessimistic about any attempt to communicate the value of taxonomies to the layman. A sampling of their remarks follows:

Response #7

I don't want to sound pessimistic, but trying to sell the idea of taxonomy is probably not a good idea. For one thing, the word itself turns executives and managers off. For another thing, I think it would be better to get your executives and managers to focus on the problems and issues that can be resolved through the use of taxonomies. THEN tell them you know of a way to solve the problems and resolve the issues (without using the “T-word”).

Response #8

How does one sell something we take for granted? Someone remarked that we see taxonomy when we go to through the aisles of supermarkets. Of course, no supermarket says ‘this is our taxonomy.’

Response #9

The problem with knowledge management is that it is difficult to bring it to the level of ROI, which is what management and business wants.

New perspective: Turning the taxonomy issue right side up

In our experience, the main problem in selling the taxonomy concept is an IT-driven perspective that is preoccupied with technology, homogenizes a diverse group of readers into a generic concept called “the user,” and focuses primarily on content.

Conclusion

Make no mistake. Taxonomies impact the bottom line even though their impact is difficult to isolate and measure. They can increase profits or organization effectiveness by helping to:

- bridge cultural differences (see “Linguistic tools for knowledge discovery”);
- focus corporate resources on innovations that will fuel long-term, sustained growth (see “Information services for corporate growth”);
- minimize risk by facilitating “triple bottom line” reporting (see “Managing the triple bottom line”);
- improve customer service through faster, more effective problem-solving;
- generate additional revenue through a richer, more efficient purchasing experience.

Selling taxonomies is hard. Showing their benefit in a specific context and for a specific audience is relatively easy.

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