Successful Taxonomy: Nine Keys to Success

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One key function of a taxonomy is to group related things together so that those “things” (whatever they may be) are easier to find. This is the classification function of taxonomy and is why in Library and Information Science, taxonomies are described as classification schemes.

The purpose of a classification scheme is to support resource discovery. If I go looking for apples in a supermarket, I know that I am likely to find other fruit nearby. Similarly, if I go looking for press releases in my knowledge repository, I may be interested in finding speeches and other corporate communications items related to my topic of interest.

Grouping “related things” together might seem like a simple thing to do. Good taxonomies make it appear simple. In practice, what seems like a natural relationship to you might not seem so to me. If I’m responsible for safety I might want my incident reports close to the relevant regulations; if I’m responsible for plant maintenance, I might want the same incident reports close to the relevant documentation and manuals for the machinery affected.

Anthropologists who study the workplace talk about the concept of a “taskonomy”—the arrangement of tools and resources around the most frequent and important tasks they serve. For example, when a blacksmith is tidying up his workshop at the end of the day, he doesn’t usually sort all her tools by type; he lays out the different combinations of tools he’s going to use the next day, so they are close at hand when he needs them.

Stores often do the same thing. In many furniture stores, you will see the furniture laid out in typical living combinations as they will be used in practice, and it’s only in the warehouse that you’ll find all the chairs together in one place, all the tables in another section, and so on.

Too often in taxonomy work, we sort things logically into warehouse-type arrangements, instead of understanding what “relatedness” means to our typical users in the course of their everyday work. This means we actually force people to go to lots of different places to gather the information they need, instead of finding them all close to each other ready to hand for the work they serve.

Understanding our users and their patterns of information use are the only ways we can overcome this.

The nine principles of classification are critical in evaluating how good your classification scheme is. If you are developing your organization’s first classification scheme; these principles will ensure that the taxonomy created will meet the needs of your users. If you have an existing structure, these principles can help you decide if that structure is meeting the needs of your users.

There are nine principles. Check how important each one of these principles is to you in developing, or revising, your classification scheme. With an existing classification, indicate whether you have achieved that principle in your structure.
The Nine Principles of Classification

- **1. INTUITIVE**
  
  The evidence of an intuitive taxonomy is that users find it easy to navigate and use. This means that users can successfully predict in which category they are likely to find the content they want, just by looking at the top level. This exploits the knowledge domain mapping function of taxonomy.

  To be intuitive, the taxonomy is structured in a way that reflects natural working or usage habits, assumptions or well-known structures (such as organizational structure, workflow, and widely entrained syllabus).

- **2. UNAMBIGUOUS**
  
  When a taxonomy is unambiguous, it does not offer alternate places to locate an information item, within the same facet.

  This means that users do not have more than one obvious option for where to place content or find content they need. The taxonomy is structured so that users are presented with a minimum of difficult choices as to where to place content or find content they need.

  Where users are encouraged to tag multiple times, even within the same facet, ambiguity is detected by measuring the broad consistency of tagging decisions. The more diverse the tagging decisions, the more ambiguity that exists.

- **3. HOSPITABLE**
  
  Hospitality means that the taxonomy can accommodate all new content without having to be revised. In hospitable taxonomies do not have suitable terms for information content, and this tends to result in people “force-fitting” documents into unsuitable categories.

  Evidence of hospitality is that the taxonomy will successfully accommodate probable or foreseen new content, without the need for significant expansion or restructuring.

- **4. CONSISTENT AND PREDICTABLE**
  
  Consistency and predictability means that the taxonomy provides sufficient context for users to be able to navigate the structure quickly and accurately. This complements the principle of intuitiveness (Principle 1). Consistency in how sub-categories are organized (e.g., alphabetically, using logical hierarchies, or familiar structures such as organization charts) enables users to navigate the taxonomy structure successfully and quickly.

  This design principle reinforces the ability of users to familiarize themselves quickly with the taxonomy.

  One simple consistency rule is that in a tree structure, the principle of subordination at any level should be the same across the whole level e.g., is a part of, is a kind of, is arranged by date, and so on.

  Consistency and predictability is compromised by competing rules for structure between different user groups, and sometimes consistency has to be traded off against predictability where user habits incorporate logical inconsistencies—supporting habits supports predictability, even where inconsistencies are embedded in those habits. User agreement (or disagreement) should surface where these trade-offs need to be made.

- **5. RELEVANT**
  
  Relevance means that the taxonomy reflects user language and user perspectives on how content is organized and connected.

  The taxonomy recognizably reflects common ways of organizing information and knowledge in the host organization or user communities. The taxonomy can also be used as a representation of the organization’s information resources and activity. This complements and supports the principle of intuitiveness. Your user and content warrant research is critical for supporting this design principle.
6. PARSIMONIOUS

The principle of parsimony means that the taxonomy structure offers no more and no less than what is required for the content that is to be accommodated. This means that there is no redundancy or repetition in the taxonomy.

This principle is in tension with—and sometimes needs to be traded off against—the principle of hospitality (Principle 3), but it complements the principle of lessening opportunities for ambiguity (Principle 2).

7. MEANINGFUL

The principle of meaningfulness is similar to the principle of relevance but relates more to the outcomes of a search.

In relevance, the taxonomy language and structure reflects the language of the users. Meaningfulness means that the outcomes of searches are accurate in terms of the usefulness of the content retrieved. Meaningfulness and relevance often go together, but might diverge if, for example, the people or software that assign taxonomy tags do not share the same world view as the users of the content.

This principle also complements the principle of intuitiveness (Principle 1).

Evidence of meaningfulness includes: category, sub-category, and topic terms enable users to successfully predict the kind of content to be found behind them; the terms used in the taxonomy reflect common usage.

8. DURABLE

Durability means that the taxonomy does not need frequent change or expansion and rarely requires radical change or reorganization. A robust taxonomy will generally only require a small audit of effectiveness every year or so unless there are radical and unexpected changes in the nature of the content being covered.

The exception is that in the first year of live operations you will likely encounter large numbers of minor (not involving major structural change) change requests, even after thorough testing.

9. BALANCED

A taxonomy structure is supposed to break up large amounts of information content into navigable and manageable clusters. This is the classification function of taxonomy. The principle of balance states that content should be distributed evenly across a taxonomy structure.

Evidence of balance includes: when the taxonomy is populated with content, there are relatively even quantities of content across the taxonomy categories; there are relatively even numbers of topic areas per category across the taxonomy; each level of the taxonomy has broadly consistent degrees of generality and specificity when compared horizontally across the taxonomy.

The principle of balance complements the principle of parsimony.

A taxonomy is a powerful instrument for applying structure to unstructured content and records. As discussed above, this is not always a simple thing to do.

Use this checklist to confirm that you have achieved your goals of providing a powerful instrument in support of managing your content and records and supporting your users’ needs to capture and retrieve your organization’s content and records.
About AIIM’s Taxonomy Practitioner Program

If you can’t find it, it may as well not exist. Don’t recreate the wheel by recreating content that you or others have developed. Start today to ensure that your organization’s information assets can always be found when needed.

AIIM offers online and classroom instruction covering the many in-depth topics of Taxonomy. The successful students achieve the Taxonomy Practitioner designation.

World-Class Professional Development and Training

The Taxonomy Practitioner program covers the strategies, standards, methods, and best practices of developing those taxonomies you absolutely need. The five kinds of taxonomies will be thoroughly discussed along with how they should be applied within your organization. An evidence-based form of developing your taxonomies will be presented in detail and the different testing approaches for your taxonomy will be thoroughly examined. An in-depth examination of metadata is provided, including the four key purposes of metadata, and the multiple means of collecting metadata will be extensively discussed. Students will work through four scenarios throughout the course to add practical insights and will be challenged to address their own current circumstances in their own organizations.

This course is designed for:

- Information architects
- Taxonomy and metadata professionals
- Information and records management professionals
- Business analysts
- Managers, project managers and technical staff
- Business unit staff (line management and staff)
- Implementation team - IT and business
- Solution integrators and providers, vendors and their sales staff
- Change agents
- Users

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About AIIM

AIIM (www.aiim.org) has been an advocate and supporter of information professionals for nearly 70 years. The association’s mission is to ensure that information professionals understand the current and future challenges of managing information assets in an era of social, mobile, cloud, and big data. Founded in 1943, AIIM builds on a strong heritage of research and member service. Today, AIIM is a global, non-profit organization that provides independent research, education, and certification programs to information professionals. AIIM represents the entire information management community, with programs and content for practitioners, technology suppliers, integrators, and consultants.

About the Author

Carl Weise joined AIIM in 2006 and is a Program Manager/Industry Advisor. He has contributed to the development of many of the AIIM courses and is a global instructor of these courses.

Carl has over thirty years of senior level records management and project management experience in the financial, IT, manufacturing, electric power, legal, and government environments in both Canada and the United States. He has worked for a records management software provider and worked as a Principal Consultant in Enterprise Content Management (ECM). He is currently providing enterprise content management (ECM), electronic records management (ERM), taxonomy and social media governance (SMG) courses throughout North America and other countries. He has reached over 1,200 students. He is aware of what is happening with records and information management in organizations across North America.

Carl is a Certified Records Manager (CRM) and has given presentations at AIIM and ARMA conferences and chapter meetings. Carl has served on the ARMA Conference Program Committee, including Program Chairperson. He served as a Board of Regent for the ICRM (Vice-President of Exam Administration). Carl developed and taught community college level records management courses and has given many seminars on records management, electronic records management, e-discovery, compliance, risk management, and enterprise content management in cities across the United States and Canada. He has written articles on records management which have been published in North America and Japan.