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A Matter of "Ba": Knowledge Creation and Dissemination By Library Faculty at Grand Valley State University

Debbie Morrow
Grand Valley State University, morrowd@gvsu.edu

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Debbie Morrow, MSLIS
Senior Librarian, University Libraries Administrative Services
Grand Valley State University

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What is "ba"? I am not a Japanese-speaker; I'm not deeply acquainted with Japanese culture. But in reading about ba *and "learning organizations" and knowledge creation, it's been very easy for me to discern seeds of* ba *at Grand Valley. In the effort underway for several years now to allow each discipline to define its own benchmarks and best practices, to develop its own specific guidelines for progress toward tenure and promotion, I see elements of* ba*. In support systems such as the Pew Faculty Teaching & Learning Center and its programs, I perceive* ba*. And most significantly, in the effort to establish a common basic teaching load, and to negotiate annually with each individual faculty member how he or she will focus for the year ahead on professional excellence, professional scholarship and achievement, and professional service, I see great potential for* ba*. But I'm getting ahead of myself …*

As an academic librarian I work in an organization whose primary purpose is providing post-secondary education – our product is student learning. Secondarily, the faculty who deliver this product, including librarians, are under an expectation as professional learners and teachers to constantly expand their expertise and to add to the world's store of knowledge. My goal in this investigation is to view the process of knowledge creation through a lens offered by Japanese business expert Ikujiro Nonaka, to extrapolate from a model he offers of organizational knowledge creation to the world of scholarly knowledge creation in the academy as represented by the University Libraries at Grand Valley State University, and to bring away some new perspectives on the role of GVSU's library faculty in contributing to knowledge creation and dissemination.

Creation of new knowledge drives civilization when it is shared or disseminated such that people working together, or working in other venues, or reviewing records at a later date, can

take direction or inspiration from the new information, and in turn develop more new knowledge (Kauffman, 1980, pp. 21-24). Since the mid-1980s Ikujiro Nonaka has developed and refined a theory of organizational knowledge creation which defines a spiraling cycle of development and sharing of new knowledge. His theory addresses knowledge creation processes which are largely internal to organizations, focused on facilitating competitive advantage for businesses. In contrast, scholarly knowledge creation typically occurs in academic settings, in institutions of higher education, and produces new knowledge which is disseminated externally and shared freely. Knowledge creation and knowledge dissemination are key activities expected of faculty scholars employed by higher educational institutions. Libraries, both academic and public, are in the position of learning how to stay relevant in the current information environment. Perhaps "staying relevant" makes the needs and strategies of libraries more similar to business competitive advantage than to the "pure scholarship" of the university's regular faculty?

In the seventeen years I've been employed at GVSU as a member of the library faculty, the university has doubled the number of students, at least doubled the number of faculty, steadily increased the numbers of classrooms, faculty offices, and residential spaces, and become more selective in admissions and more widely recognized as an excellent educational value. I've watched this evolution with interest and considerable respect; and of late have been somewhat directly caught up in the consequences of the escalation of GVSU's institutional scholarly aspirations through involvement in the University Libraries' faculty personnel management processes. Librarians in university and college settings may hold faculty status, or may be considered professional staff; at GVSU librarians hold both faculty status and rank. As faculty at GVSU, librarians are expected to demonstrate scholarship as well as professional excellence. With the scholarship expectation comes the requirement to disseminate new knowledge which

has been gained through scholarly investigation carried on in addition to our main work

assignments. While faculty librarians have professional training (the Masters' degree in Library

Science, or MLS, which is considered the terminal degree) and work closely with students and

faculty to support the institution's academic mission, we function more as practitioners in a

clinical setting than as academic scholars with an assigned teaching load. The focus of

librarianship in general, including at GVSU, is primarily best practices – determining our goals

in supporting the university's educational mission and learning outcomes, and considering how

we can continually improve on achieving those goals. Of concern to me are the questions of how

to view the role of faculty librarians in participating in knowledge creation and dissemination,

and how to view the organizational context within which academic librarians function. In short,

is it reasonable and appropriate to place the same requirement for knowledge creation and

dissemination on librarians as on academic scholars, simply because we are faculty?

<div align="center">Concepts: The Building Blocks of Knowledge Creation</div>

Concepts I'll be exploring and building upon in this paper are largely drawn from Ikujiro

Nonaka's model of organizational knowledge creation and attendant concepts with which he

rounds out his theory, with a broader business concept to set context, that of the *learning

organization*.

Garvin discusses knowledge creation as a key aspect of successful (business)

organizations, and defines a learning organization as being one which is "skilled at creating,

acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge

and insights" (1993, p. 80). I will be considering my workplace, the University Libraries at

Grand Valley State University, as an example of a learning organization which doesn't happen to

be a for-profit business. Nonaka's model of organizational knowledge creation relates to

Garvin's general definition of learning organizations; he describes organizational knowledge creation as "the capability of a company as a whole to create new knowledge, disseminate it throughout the organization, and embody it in products, services, and systems" (Nonaka & Takeuchi, 1995, p. 3).

Concepts in Nonaka's organizational knowledge creation model include *types* of knowledge, *knowledge conversions*, organizational structure, and facilitation of the knowledge-creating environment. The foundational element of Nonaka's theoretical approach is the conceptualization of knowledge as being divided into two types, *explicit knowledge* and *tacit knowledge*.

- *Explicit knowledge* is that which can be "articulated in formal language including grammatical statements, mathematical expressions, specifications, manuals, and so forth. This kind of knowledge can be transmitted across individuals formally and easily. This has been the dominant mode of knowledge in the Western philosophical tradition" (Nonaka & Takeuchi, 1995, p. viii).

- *Tacit knowledge* is that which "is hard to articulate with formal language. It is personal knowledge embedded in individual experience and involves intangible factors such as personal belief, perspective, and the value system" (p. viii).

Nonaka makes the case that Japanese culture intrinsically recognizes that tacit knowledge and ways of knowing are as significant as possessing and sharing explicit knowledge; and that Western cultures tend to place much lower value, or even awareness, on tacit knowledge.

The basis of Nonaka's model of knowledge creation is the concept of knowledge conversions, where conversions are a series of escalating stages in knowledge creation and growth which occur in a specific sequence. Organizational knowledge creation consists of two

major components: forms of knowledge interaction and levels of knowledge creation.

Interactions between knowledge types (tacit and explicit) and organizational levels (individuals, groups, organizational) are the source of four knowledge processes or conversion modes leading to knowledge creation. These are: *socialization, externalization, combination*, and *internalization*, and will be described in following sections (Nonaka & Takeuchi, 1995, p. ix).

On an abstract level, Nonaka builds a consistent model of ever repeating and spiraling knowledge creation processes based on the four knowledge conversion modes. However, he also enriches his model on a practical level by proposing that organizational structure and environment supported by an organization's leaders plays a significant role in making effective and ongoing knowledge creation a reality. He proposes as an ideal structure what he calls a *hypertext organization*, which he distinguishes from familiar, traditionally hierarchical organizations or more recent experiments with task-based organizations.

In regard to organizational environment and the role and responsibilities of an organization's leadership, Nonaka introduces a deeply culture-laden Japanese concept, foreign to American and Western thinking – the concept of *ba.* In Nonaka's words, *ba* is "a Japanese term difficult to translate in English, [which] refers to a physical, virtual, and/or mental space shared by two or more individuals…" (Nonaka & Nishiguchi, 2001, p. 4). With the introduction of the concept of *ba*, Nonaka argues that the role of management in the knowledge-creation process should be "to design and/or facilitate the emergence of an appropriate *ba* for each of the key [knowledge conversion] stages rather than attempting to intervene directly in the knowledge-creation process" (p.4).

My intention is to extrapolate from the organizational (business) context to a portion of the academy. In academia generally the goal of generating new knowledge is primarily just that:

"pure research," additions to the world's accumulation of knowledge without profit as a direct motive. Academic libraries, however, are largely service operations which increasingly must make a sound business case for their relevance given ready end-user Internet access to vast quantities of information. Can we achieve a consistent high level of relevance if we clearly establish ourselves as a learning organization?

<div align="center">Theory: Ikujiro Nonaka's Knowledge Creation Spiral</div>

In *The Knowledge-Creating Company* Ikujiro Nonaka (Nonaka &Takeuchi, 1995) describes, and illustrates through numerous case studies, the theory of the dynamic behind a string of significant successes in Japanese businesses in recent decades. Among the companies he uses as case studies are some familiar names: Honda, Mazda, Canon, and Fuji Xerox. It is his contention that certain approaches to shaping a business environment and organizational structure, in combination with cultural characteristics inherent to the Japanese worldview, can be represented as a model for effective continuous organizational knowledge creation.

Nonaka stresses that the interaction between tacit and explicit knowledge which leads to new knowledge is performed by individuals, not by organizations; but if the knowledge of individuals is not shared with others or amplified at a group or organizational level, then the knowledge does not spiral organizationally, so as to allow the organization and all of its component members to increase their knowledge bases (p. 225).

The spiral of organizational knowledge creation occurs in a series of four stages or knowledge conversion modes:

- *Socialization* (from tacit knowledge to tacit knowledge). The focus of socialization is the acquisition by an individual of tacit knowledge from others though observation,

imitation, practice, and experience, such as may occur through on-the-job training or

apprenticeship (Nonaka & Takeuchi, 1995, pp. 62-63).

- *Externalization* (from tacit knowledge to explicit knowledge). The process of

  externalization is that of articulating tacit knowledge into explicit concepts. Typically this

  will be a group effort, in which a succession of metaphors, analogies, concepts, and

  hypotheses or models are generated as participants work to create new explicit concepts

  for possible development. The task force's members are selected for their particular range

  of complementary individual knowledge-bases (pp. 64-67).

- *Combination* (from explicit knowledge to explicit knowledge). The combination mode of

  knowledge conversion involves combining different bodies of explicit information in

  order to systematize concepts into knowledge systems; individuals and groups exchange

  and combine knowledge through meetings, phone conversations, e-mail, documents,

  computer databases, and the operationalizing of corporate visions, business concepts, and

  product concepts (pp. 67-68).

- *Internalization* (from explicit knowledge to tacit knowledge). Internalization takes place

  when the explicit knowledge of individuals becomes tacit knowledge by integrating it

  into their own knowledge bases, often facilitated by creating documents, specifications,

  manuals, and oral stories (pp. 69-70). Further, documentation and other syntheses shared

  throughout the organization allow others to know or experience indirectly, as a shared

  mental model, what the original participants have experienced; this becomes part of a

  socialization conversion initiating a new spiral of organizational knowledge creation (pp.

  70-72).

Nonaka also contends that this model can only work most successfully when supported by an organizational structure which consciously fosters each of the knowledge conversion modes (Nonaka & Takeuchi, 1995, pp. 233-234). In his view, businesses have tended historically to be rigidly hierarchical bureaucracies, with product concepts and company direction emanating from the top to all those below. In the latter half of the twentieth century successful experiments have been attempted with task-force-based organization, for greater flexibility and fast response to changing conditions. Nonaka asserts that hierarchy vs. task force should not be seen as dichotomous either/or structural options, but can be successfully combined in a matrix organization, or even more effectively synthesized in what he calls a hypertext organization. In the latter, corporate-level efficiency and local flexibility are simultaneously maximized in an organization which balances bureaucracy and task forces in a complementary way; business systems, project teams, and organizational knowledge base exist as separate interconnected "hypertext" layers available as needed in the processes of knowledge creation (pp. 166-167).

Finally, Nonaka elaborates on a final concept, that of *ba*. *Ba*, he explains, may be defined in knowledge creation as "a platform where knowledge is created, shared, and exploited. It functions as a medium for the resource concentration of the organization's knowledge and of the individuals who own and create such knowledge. *Ba* collects the applied knowledge of the area and integrates it. It is from such a platform that a transcendental perspective emerges to integrate and create knowledge" (Nonaka et al., 2001, p. 19). There are four types of *ba*, each supporting a particular one of the four modes of knowledge conversion between tacit and explicit knowledge:

- *Originating ba* is associated with the socialization process, where tacit knowledge is shared among individuals, generally in face-to-face environments; sympathy, empathy, care, love, trust, commitment, freedom, and safety emerge out of originating *ba* (p. 20).

- *Dialoguing ba* is associated with externalization, when individuals are mixed in teams and convert tacit knowledge to explicit knowledge by generating shared mental models and concepts through extensive dialog (p. 20).

- *Systematizing ba*, associated with combination of explicit knowledge with existing information and knowledge, often takes place in a virtual world enabled by information technologies such as groupware, document tools, and databases (p. 21).

- *Exercising ba* supports internalization by facilitating the conversion of explicit knowledge to tacit knowledge through on-the-job training and active participation with senior mentors and other colleagues (p. 21). By creating and managing *ba*, an organization can manage the knowledge-creating process effectively: "The success of knowledge creation depends on management's assumption of responsibility, justification, financial backing, and caring" (Nonaka & Konno, 1998, p. 53).

The scope of this paper is the extrapolation from the competitive for-profit environment (organizational knowledge creation) to the not-for-profit academic scholarly milieu (scholarly knowledge creation) at the level of a service and support unit within an academic institution, with respect to the fundamental concept of creation of new knowledge. In particular, although *ba* as described by Nonaka is a specifically Japanese-culture-based construct, I am very interested in considering the extent to which we could successfully interpret it and incorporate it into the management and work environment of GVSU and the University Libraries.

<center>Situation: "Neither Fish Nor Fowl"</center>

At Grand Valley, the University Libraries are defined as an academic unit under the organizational purview of the Provost and Vice President for Academic Affairs. Knowledge creation and dissemination, or scholarship, on the part of GVSU's library faculty has in the past

occurred at a fairly low level of participation. In contrast to a three- or four-course teaching load

per semester and the associated preparation time for classroom faculty, librarians work what

might be considered an ordinary 8am-to-5pm, 5-days-per-week business schedule, interrupted

and re-arranged to enable coverage of services required of us on evenings and weekends. With

little "away" time from providing services or being on call, pursuing research questions and

producing written or other materials for dissemination of results has tended to take a very low

priority. Presently the bar is being raised and expectations heightened, within the context of

developing more explicit and openly shared definitions of basic workload and annual agreements

on specific projects and outputs. Ideally the result of defining unit and individual "scope of

work" definitions and "individual workload" agreements will include the evolution within the

GVSU University Libraries of a culture of knowledge creation and dissemination which is

supportive of the expectation that both new and more seasoned library faculty will participate,

and of our efforts to do so.

<div align="center">Applying the Theory: How Does it Fit?</div>

Let us take the concept of two knowledge types, explicit and tacit, as a given, recognizing

that in our Western context consciousness of tacit knowledge may tend to be rather low. How

might Nonaka's knowledge conversions appear in the GVSU University Libraries?

In their day-to-day activities library faculty regularly experience the socialization mode

of knowledge conversion, from tacit knowledge to tacit knowledge. A junior librarian may work

alongside a more senior colleague at a reference desk, observing how interactions with patrons

are conducted; two colleagues may team up to provide research instruction for a class; one

librarian may observe another leading a research instruction session solo.

Externalization, conversion of tacit knowledge to explicit knowledge, also occurs with considerable frequency in the library. Building, managing, and facilitating access to an exponentially growing collection of print and digital information resources and their associated technologies requires the creative synergy of colleagues with different specializations. For example, a case in point: developing a way to collect, store, and provide ready and intuitive user access to new bodies of born-digital resources may be accomplished by assigning a project team with representatives from the library's technical access services, instructional services, collection development services, and possibly others. The first task of such a team will be to conceptualize a solution, to begin to put into concrete concepts the sort of ideal end product which will meet the needs that have been defined. Externalization may also occur when a research and instruction librarian initiates a collaboration with a classroom instructor, to conceive and develop new instructional components for more effective teaching of information research and evaluation strategies.

In improving services and providing systems for meeting (or anticipating) user needs, conversion from explicit knowledge to explicit knowledge – combination mode – takes place when the concepts developed by project teams and task forces are augmented by input from the library's administrative services: feasibility assessments, outcome assessments and evaluations, budget plans, timelines, etc. are applied to develop final proposals. Combination also happens when research instruction components or modules are developed with teaching faculty and adopted into curricula.

The final knowledge conversion mode, internalization, from explicit knowledge to tacit knowledge, is key to Nonaka's model and is probably the most under-represented knowledge conversion mode in the GVSU University Libraries to date. Internalization should be the ideal

opportunity for library faculty who have participated in learning and knowledge-building experiences to integrate their experiences into their own tacit knowledge through reflection, documentation, specification, or other synthesis, and also to contribute that knowledge to both the organizational knowledge-base and to the wider profession outside of the institution, through publication and presentation.

Nonaka contends that his model of the hypertext organization is the ideal organizational structure to support and take best advantage of both tacit and explicit knowledge and all four conversion modes. Key to the hypertext organization is commitment of individuals to just one work assignment at a given time. The GVSU University Libraries has very recently undergone a restructuring of the unit, introducing a modest level of hierarchy into what had been an almost totally flat structure. It is proposed that the structure will mature into a matrix organization, where cross-functional teams will form and dissolve as needed, while individuals in those teams will also remain members of the hierarchical structure. Thus as a unit there is the potential to take advantage of knowledge and knowledge conversion modes broadly in a structure which is prelude to Nonaka's ideal hypertext organization.

Organizational structure alone is insufficient to maximize organizational knowledge creation. Nonaka is explicit about the positive impact organizational leaders can exercise when they actively work to provide the physical, psychological, emotional, and temporal spaces in which knowledge conversions most effectively take place. These spaces are *ba*, and each knowledge conversion mode is associated with its own type of *ba* – "shared time and space for emerging relationship among individuals and groups to create knowledge" (Nonaka et al., 2001, p. 19). "To manage knowledge creation, leaders must manage *ba* by providing *knowledge vision* and by *building and energizing ba*" [original emphasis] (p. 25).

Originating *ba* are associated with socialization, tacit knowledge to tacit knowledge conversion; these emphasize physical face-to-face experiences. Open organizational designs and customer interfaces which encourage direct encounter between individuals facilitate the emergence of such *ba,* and are the places where the knowledge creation process often begins. Much of the work of libraries as organizations embodies just such interactions between faculty and other colleagues, and with the library's clientele. In the GVSU Libraries the level of interaction between librarians and students is high; opportunities for interaction with teaching faculty are a growing emphasis; and in-person learning from each other is an avenue we should explore more fully.

Dialoguing *ba* seems almost self explanatory: the process of knowledge conversion through externalizing, converting tacit knowledge to explicit knowledge, is rooted in dialogue. Terms and concepts which can be shared accurately with a wider audience are evolved out of intensive discussion among intentionally selected groups representing a range of tacit knowledge. As a service and support unit, the library routinely has the need to evolve new solutions and new services to meet the needs of library users, and often uses as a mechanism cross-functional teams and task forces which convene for a period and develop proposals.

Combination of explicit knowledge may be accomplished most effectively with the assistance of information technologies; thus, systematizing *ba* are often characterized by interaction in the virtual world, rather than in face-to-face space and time. Libraries have been in the process of adopting tools and workflows that support systematizing *ba* for some three decades: integrated library management systems allow management data from many aspects of the organization's operations to reside within a single system, and the data can be combined and presented in various ways to serve the needs of different workflows. As technology has created

platforms for new types of resources and new tools for managing these, additional options have been incorporated into the library's suite of tools for facilitating systematizing *ba*: ERM (electronic resource management) systems and wikis are just two examples, as well as ubiquitous e-mail.

Exercising *ba* facilitates the conversion of explicit knowledge to tacit knowledge, the internalization process. Nonaka states that the interactions which characterize exercising *ba* take place on-the-site, sharing time and space, but is a little vague about what these interactions are (Nonaka et al., 2001, p. 21). The emphasis seems to be on opportunities for newer workers to receive focused training from more senior mentors and colleagues in ways which encourage self-refinement through the use of explicit knowledge in real-life or simulated applications; on-the-job training and active participation are stressed, allowing internalization of explicit knowledge through action. I believe an example of internalization and exercising *ba* might be the periodic meetings held by the Libraries' Research & Instruction Division for the purpose of allowing faculty to make presentations to each other on new information resources, etc. which they've studied. The synthesized learning of individuals is shared with others, an opportunity to build the organizational knowledge-base; and at the same time newer faculty get opportunities to practice teaching and presentation skills in a supportive and collegial environment.

<div align="center">Findings: A Foundation for Knowledge Creation in the GVSU Libraries</div>

Ikujiro Nonaka's model of organizational knowledge creation, along with his concepts of the hypertext organizational structure and *ba*, have significantly informed my views on my role as a faculty librarian regarding knowledge creation and dissemination. Unexpectedly, and perhaps more importantly, they have also given me new perspectives on the organizational

structure of which I am a part, and of its potential as a unit for becoming a true learning

organization which produces services and learning support.

The University Libraries has been undergoing a renovation of its organizational culture as

well as structure. Grand Valley will benefit greatly to the extent that the University Libraries can

succeed in becoming an excellent example of a learning organization. A great deal of potential

exists, and indeed is increasingly realized under the current Dean and managerial leadership; it

remains only to infuse a thorough internalization of a new vision throughout the staff, and for

management to provide the environmental support for increased levels of creating, acquiring and

applying learning: to support *ba*.

In the context of Nonaka's model of knowledge creation, and of learning organizations,

dissemination of new knowledge in the academic setting becomes a dual responsibility: the

conversion of new knowledge from explicit new knowledge held by an individual or a project

team should be internalized as tacit knowledge, processed in ways which make it accessible

throughout the organization (documentation, specifications, etc.), and applied to actual processes

or training simulations internally; and the internalization process is also an opportunity to

produce synthesized new knowledge in forms which can be contributed externally beyond the

unit and the institution, as workshops, conference presentations, written publications, etc. While

faculty librarians may function very differently from our teaching faculty colleagues elsewhere

in the university, we are in fact deeply involved in an enterprise which should ideally be

recognizable as a knowledge-creating organization. To maximize the success of the unit we

should be embracing knowledge dissemination as a key step in the process of making new

knowledge part of our organizational knowledge-base, and part of the profession's as well.

Key to fostering the growth of a well-functioning knowledge-creating crew of a learning organization is the support of managerial leadership, in the form of effective organizational structures and conducive *ba* – the variety of 'spaces' where knowledge creation is most readily engendered. Garvin (1993, p. 91) describes some first steps in building a learning organization: one, provide time for reflection and analysis, because learning is difficult when employees are harried or rushed; and two, stimulate the exchange of ideas by opening up boundaries, encouraging interaction across functions internally and with customers and colleagues externally. These are a few ways in which management can signal the priority of learning in the organizational agenda. While the Libraries' organizational structure is presently, on paper, hierarchical, there is a level of support for matrix activity, where problem solving is somewhat frequently carried on by cross-functional groups. Thus the organization follows some of both Nonaka's and Garvin's precepts regarding opening up boundaries to stimulate creativity in approaching solutions and new directions. Understanding, recognizing, and actively fostering appropriate *ba* for maximizing knowledge creation processes would be a learning process in itself, but perhaps a very worthwhile one for the University Libraries' leadership to consider.

Recommendations and Conclusion: A Matter of *Ba*

I began this inquiry with a question: "Is it reasonable and appropriate to place the same requirement for knowledge creation and dissemination on librarians as on academic scholars, simply because we are faculty?" Upon reflection, I would conclude that it is indeed appropriate to place an expectation on academic librarians to participate in knowledge creation and dissemination. It's appropriate not because we are necessarily scholars – very often we function more like clinical practitioners, and have little time or inclination for "pure" scholarship; but appropriate because arguably we are employed in a learning organization, we are members of a

knowledge-creating crew. In order for a learning organization to realize its full potential it must commit to support of continuous learning throughout its staff and to application of new knowledge and insights to improvement of services, systems, and products. In the business world knowledge created may for the large part be retained internally for competitive advantage; in the context of the academy it is always appropriate to share new knowledge broadly, with others in one's discipline or profession at least. Actually, Nonaka makes the case that even in the business world, the internalization process may include various kinds of inter-organizational knowledge sharing, for example with affiliated companies, customers, suppliers, and competitors (Nonaka & Takeuchi, 1995, p. 89). Thus, responsibilities lie in two directions: the responsibility of academic library faculty, as members of a learning organization, to participate fully in the knowledge-creating conversion spirals which keep the organization strong and growing; and the responsibility of the organization's leadership to commit to ongoing learning and to fostering the physical, psychological, social, emotional, temporal, and virtual spaces – the *ba* – where knowledge creation takes place.

And so I offer five recommendations which I believe could strengthen the University Libraries at Grand Valley, and help the unit to make progress toward becoming an excellent knowledge-creating organization, including library faculty who are well situated to meet knowledge creating and disseminating expectations.

- *Recommendation 1*: I'd like the opportunity to share this review and extrapolation of Ikujiro Nonaka's organizational knowledge creation model with others in the GVSU Libraries; and I'd propose that we could benefit from developing a shared understanding of knowledge conversion stages, *ba*, and the kinds of *ba* which foster knowledge conversions.

- *Recommendation 2*: the beginning of knowledge creation spirals is the socialization stage, converting from tacit knowledge to tacit knowledge, often in the form of apprenticeships or on-the-job training which provides intensive opportunities for observation, imitation, and practice. It would be valuable to have a clear managerial focus on supporting *ba* which facilitate faculty and other staff who are more experienced in teaching, or reference work, or using technology, etc. to provide observation, imitation, and practice opportunities for those who are learning. "More experienced" staff aren't necessarily exclusively faculty or older, senior faculty members; and "learners" aren't necessarily always newer employees.

- *Recommendation 3*: the internalization conversion stage is the final step in knowledge creation, from explicit knowledge to tacit knowledge. The knowledge created through the creative conceptual interaction of individuals brought together into groups (externalization) and refinement and realization as products and services in combination with existing explicit knowledge is internalized as part of the knowledge-base of individuals and the organization. It would be highly desirable to pay specific attention to the full range of ways that documentation, specification, oral presentation, etc. could be encouraged as internalization processes which result in synthesized knowledge that can be shared locally and externally. Integrating new knowledge into the knowledge-base of the library will help us all to become more effective contributors to our vision, mission, and goals; and sharing new knowledge externally with the profession enriches the profession and meets the expectation the university holds for faculty dissemination of knowledge. Again, supporting the *ba* which facilitate internalization processes is key.

- *Recommendation 4*: Nonaka indicates that it is possible for a matrix organization to be intentional about supporting and fostering the stages of knowledge creation and conversion. I would encourage the Libraries' management to consider the potential that could lie in using cross-functional teams and task forces as often as possible to support externalization processes which are optimally fertile grounds for knowledge creation.

- *Recommendation 5*: A final recommendation relates to an important concept in systems theory to which Nonaka refers several times, though I didn't address it in this paper: the significance of *requisite variety*. Briefly, requisite variety is the concept that an organization will deal most effectively with challenges posed by its surrounding environment if its internal diversity and complexity matches external diversity and complexity (Nonaka & Takeuchi, 1995, p. 82). In continuing to build the staff and faculty of the University Libraries to be more effective producers of services, products, and systems for the larger university, every effort must be made to keep expanding the diversity of skills, knowledge, background, experiences, and outlooks that comprise our organization. This will improve our organizational ability to be sensitive and responsive to the needs of the larger surrounding university organization, in part by increasing the potential for highly diverse dialoguing *ba* in externalizing task forces.

Through this investigation and reflection I have acquired a new perspective on my position as a faculty librarian and the role of knowledge creation and dissemination as a professional expectation. What encourages me is the idea that knowledge creation isn't something I or my colleagues must do alone, if we are part of a learning organization which helps to provide, create, and support *ba*, the facilitating spaces, which stimulate the processes leading to knowledge creation.

Acknowledgements

References

Garvin, D. (1993). Building a learning organization. *Harvard Business Review*, *71*(4), 78-91.

Kauffman, D. (1980). *Systems one: An Introduction to systems thinking*. Boston, MA: Pegasus

Communications.

Nonaka, I. & Konno, N. (1998). The Concept of "*ba*": Building a foundation for knowledge

creation. *California Management Review*, *40*(3), 40-54.

Nonaka, I., Konno, N., & Toyama, R. (2001). Emergence of "*ba*": A Conceptual framework for

the continuous and self-transcending process of knowledge creation. In I. Nonaka & T.

Nishiguchi (Eds.), *Knowledge emergence: Social, technological, and evolutionary*

dimensions of knowledge creation (pp. 13-29). New York, NY: Oxford University Press.

Nonaka, I. & Nishiguchi (Eds.). (2001). *Knowledge emergence: Social, technological, and*

evolutionary dimensions of knowledge creation. New York, NY: Oxford University

Press.

Nonaka, I. & Takeuchi, H. (1995). *The Knowledge-creating company: How Japanese companies*

create the dynamics of innovation. New York, NY: Oxford University Press.