The Improvisational Nature of the Change Process

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To deal with change, the traditional view is to plan in order to rationally coordinate activities within an organization to meet the challenges of the future. One basic assumption is that any task may be decomposed to its various components, and each of these can be dealt with separately and sequentially. When adaptations are necessary, they are made from our understanding of the current environment. Then as soon as possible we try to get back "on track". In recent years, many people have challenged that view because of the need to interpret the environment from different points of view, craft strategies to deal with unpredicted external changes, and participate in teamwork characterized by shared values and shared responsibilities.

Traditional planning expects a long time horizon in a stable environment. A manager is supposed to deal with benchmarking and forecasting. The more information that one gathers about these variables, the better one can predict the future. However, the environment is not stable. The pace of change has increased and the amount of information that is available has increased and become easier to access. But because of the quantity, it is harder to digest and synthesize into a coherent whole. In my previous position as a data processing analyst at the Nebraska Department of Revenue, a colleague who worked with economic forecasting said that as soon as the forecasts become available, organizations will act on them to improve their positions within their industry. So the environment changes constantly and forecasts are never accurate in predicting the future. In a similar sense, as soon as trends are identified and the future forecasted in the information industry, we librarians act to mitigate the effects of potential changes. Thus, the environment becomes turbulent rather than stable. If we go back to Peter Vaill's metaphor, managing has become akin to paddling a canoe in "permanent white water.[1]" In order to move to a certain point in the river, one must know the paddle strokes, one's abilities and understand the canoe which in this case would be the available resources and organizational structure. One improvises according to current conditions of not only the environment but what one perceives as available resources. Improvisation is not possible unless one has mastered the basic traditional skills about handling a canoe.

In the real world, we do what is necessary at the moment to go where we want to go. What probably occurs more often than we care to admit is that we act and then try to make sense of what we did according to the structure we have in mind. We codify unplanned changes.[2] We "see what we believe" rather than "believe what we see" in trying to interpret an event.[3] Traditional

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ways rooted in Lewin's three-stage change model of unfreezing, change, and refreezing no longer seems to work.[4] There is no stability to regain in an environment of uncertainty, particularly in dealing with technology that is open-ended and customizable such as library automation systems. Thus the single sustainable competitive advantage has become how to learn faster and act faster since the raw information may be widely available.[5] The advantage is in re-casting the items of information into alternative frameworks to better understand the implications of impending changes. The view to planning being examined here is improvisational in nature. In improvisation, we are crafting strategy to build on one another's ideas within boundaries based on disciplined individual core skills that are understood by members of the team.[6] Those skills must constantly be sharpened, improved and updated. They form the basis from which to improvise, and the improvisation is local in nature.

Orlikowski and Hofman presented a model where they treat change as an on-going process, not as a scheduled event.[7] This model is particularly applicable in situations where the implemented change is open-ended and customizable such as a change in information systems. Therefore, it is not possible to craft a blueprint for the change process. In preparing for the future, there are three kinds of changes: (1) anticipated, (2) emergent, and (3) opportunity-based. An instance of anticipated change in many libraries is the move from one automated system to another with attendant timeline for preparation and implementation. The new system may be able to keep track and provide statistics on materials used but not charged out. Based on that knowledge and experience with the new system, an emergent change may be in the amount and nature of reference services provided during certain time periods. As we gain experience with the new system, an opportunity-based change that is purposeful and intentional may be a change in workflow. For example, some collection maintenance functions may move from the cataloging module under the old system to the circulation module in the new system because the menu choices are in that module and they can be done more appropriately there.

My library at Western Illinois University changed automation systems last summer. This is an instance of anticipated change. We, as a participant in a state-wide network of 45 libraries, moved from an old system based on the WLN software linked to a separate circulation system originally developed at Ohio State University to an integrated system from DRA. Of course, the process started a long time before last summer. In preparation for working with new software and hardware, our communication moved from dedicated lines to the Internet. We also acquired NT microcomputers to use as staff workstations according to earlier timetables because the newer software is being developed for the NT platform. Other parts in preparation for anticipated changes include barcoding the collection and attending training sessions for the new system and preparing for data conversion.

However, there were many changes we could not anticipate. We also could not adjust the implementation timetable to local conditions beyond our control nor modify internal workflow sufficiently based on descriptions for a product still under development. The result is to make-do with what we have at hand at the point of need. According to an earlier timetable, the public interface was to be Web-based. At that time, we intended to use some of our older machines running Netscape under Windows 3.1 as public workstations. Later on, when the timetable was revised with the provision that the primary public interface was to be based on the DRA Classic system accessible through telnet, a communications software was recommended by the vendor and the state systems organization that emulates a DEC VT-420 terminal. That software, however, runs under Windows 95 or Windows NT only. While we had fully intended to have microcomputers running Windows 95 in the public areas on Day One, funding through a grant was delayed. Initially, we tried loading Windows 95 onto those older 486 machines with limited RAM and were successful in running the communications software in testing. But those older machines were extremely slow and started to crash. Even though this plan looked good on paper, it did not work out. We had to develop an emergent plan based on running another communications software that will emulate at least a VT320 and run under Windows 3.1. Such a piece of software was locally available on every machine through an institutional site license. In this instance, the goal is to communicate with the mainframe at another location. The local boundaries are the abilities to communicate through a telnet session on Internet, emulate a high-end DEC terminal, and work with Windows 3.1. We also have the local expertise to make this work.

An instance of opportunity-based change came about in cleaning up error files created during data conversion in moving to the new system. One project involved writing macros on the preferred communication software on a Windows 95 machine to discharge more than 20,000 items. With the old system, materials placed in storage were charged to a special-use ID number. When the holdings records were converted to DRA, those items remained charged out. Initially, the Access Services Librarian thought of physically taking a scanner to the storage location to scan the barcode on every volume. A computer connection was not available in the storage location and the process would have been extremely time-consuming. Since a file of barcode numbers can be created, after a few tries, I succeeded in writing a macro to perform the job. This opportunity provided the beginning in the use of macros as a regular part of maintenance. Another macro was written and put to use in adding the word "storage" to all item records of material housed in storage. In case any of those items are requested, when it is returned and checked in, the workstation will beep and display the message on the screen to alert the student worker that the item should be returned to storage rather than for shelving in the stacks. More recently, macros have been written to change the permanent location of materials. Again, local resources are available to enable such an opportunity-based change. It is important to note that those circulation maintenance functions were performed by a cataloger for the benefit of reference and circulation so that reference librarians no longer have to explain to our users inaccurate or ambiguous messages on the computer screen. While the focus is for the benefit of the library, those tasks involve cooperation and trust among librarians from different departments.

Keys to such a change process are the alignment of internal support and dedication of resources. The support may involve cultural changes where library departments are focused on the function and performance of the total library within the institutional mission rather than performance of single departments relative to similar departments in other institutions. While changing the computer system affected the whole library, changing the communications software involved cooperation between Reference who must teach students how to use it, the Electronic Resources Unit who worked with the technical details, and the library representative to the state-wide organization who acts as the liaison between the local library and the organization. In using macros for maintenance, proposed solutions to perceived problems require cooperation among different departments and use of expertise that resides in different units in the library.

Thus, we look at the process in coping with change more as following recipes than blueprints where we must understand the assumptions behind the recipes, acquire intimate knowledge of available resources, and pay attention to the local environment.[8] Local perception is ultimately what determines success or failureCnot on how closely we follow the recipe but on the resulting dish that emanates from interactions between the cook and available ingredients within the environment provided by the local kitchen.

Notes

1. Peter B. Vaill, *Managing as a Performing Art: New Ideas for a World of Chaotic Change* (San Francisco: Jossey-Bass, 1991), 2.
2. Karl E. Weick, "Organizational Redesign as Improvisation," in *Organizational Change and Redesign*, ed. George P. Huber and William H. Glick (New York: Oxford Univ. Pr., 1993), 351.
3. Mary M. Crossan, "Improvise to Innovate," *Ivey Business Quarterly* 62 (autumn 1997): 39.
4. Wanda J. Orlikowski and J. Debra Hofman, "An Improvisational Model for Change Management: The Case of Groupware Technologies," *Sloan Management Review* 38 (winter 1997):11–12.
5. Crossan, "Improvise to Innovate," 38.
6. Mary M. Crossan, Roderick E. White, Henry W. Lane and Leo Klus, "The Improvising Organization: Where Planning Meets Opportunity," *Organizational Dynamics* 24 (spring 1996): 20–35.
7. Orlikowski and Hofman, 11–21.
8. Weick, 350.