Organization Management Journal

Volume 2 | Issue 1 Article 4

5-1-2005

Recent Research of Note

C. Melissa Fender
Drexel University

Organization Management Journal
Linking Theory & Practice
2005 Vol. 2, No. 1, 27-30

ISSN 1541-6518
www.omj-online.org

Recent Research of Note

'Decision making at different levels of the organization and the impact of new information technology: Two cases from the financial sector' by Nachoem M. Wijnberg, Jan van den Ende and Onno de Wit in Group and Organization Management, September, 2002, pp. 408–429.

Summarized and interpreted by
C. MELISSA FENDER
Drexel University

Today's information technology is not only proliferating rapidly through all areas of organizations, but carrying with it access to critical information at all levels of these organizations. It is therefore of great interest to determine how information technology can be used to produce better decision making at different levels, and what strategies management should adopt for optimum results. This requires that the types of decisions at each level be thoroughly analyzed.

The authors of this article have identified two different types of decisions – primary and secondary. Primary decisions and their associated criteria are tied to the organization's overall performance, as judged by the stakeholders. These decisions are strategic, and the decision makers shoulder the accountability for the outcomes of these decisions. Secondary decisions affect only parts of the organization but make sense within the context of the primary decisions. Secondary decisions are often operational and their range of influence is limited.

The authors reached back to early management theory to analyze how these decision types came into being. They compared systematic and scientific management. Systematic management arose as organizations grew too large for a single owner to handle. It introduced new technologies of internal communication that enabled management to control and coordinate (Yates, 1989). Summarized data on operational outcomes flowed up to senior management; instructions, executive mandates and operational decision criteria flowed down (Nelson, 1974). As the layers of middle management continued to grow, the necessity for this information flow increased. The focus of systematic management was on primary decision making, and the information flow necessary to support it.

Frederick Taylor's scientific management focused on secondary decisions to create efficiency. In a well-designed Taylorian system, these secondary decisions would align almost seamlessly with organizational strategy. Taylor advocated keeping the primary decision making as high as possible within the organization to remove doubt and inefficiencies at the factory floor level. He proposed that a planning department should be created that would translate the primary decision making criteria into procedures and secondary decision making criteria for lower levels of the organization (Nelson, 1974). This is clearly the precursor to the strategic planning and middle management functions of today.

From the systematic and scientific management approaches, the authors summarized four specific elements in a decision-making framework.

1. "Improvement and formalization of information streams so as to make decision makers more accountable for decisions of the first type.
2. Use of the improved information to better coordinate and control the operations of the organization as a whole and especially middle and lower management.
3. Creating conditions (e.g., by setting up a planning department) that allow decisions of the second type to be aligned with the relevant decisions of the first type and that allow the alignments as well as the execution of the decisions of the second type top be controlled effectively.
4. To put the level at which it becomes necessary to make decisions of the first type as high as possible in the organization." (Wijnberg, van den Ende, and de Wit, 2002)

The authors posit that office technology, including communications and data processing, supports the first two aims. Planning aids support the third aim, and general technology the fourth. They also feel that service organizations, even more than manufacturers, require the first two characteristics for success. Service organizations are highly dependent on their front-line employees as customer interfaces; these employees must make decisions aligned with the primary criteria. Hence, the fourth aim is likely to be counterproductive.

The authors studied two examples from the Dutch banking industry in the 1920s: the Rotterdamsche Bank in Amsterdam and the Postal Cheque and Clearing Service. Both organizations experienced rapid growth and both implemented new technology in roughly the same time period. The outcomes could not have been more different.

In 1920, the rapidly growing Rotterdamsche Bank in Amsterdam (ROBAVER) had 1,430 very overworked employees and faced a declining financial position. Its response was to reorganize work procedures by defining tasks and processes fairly inflexibly. Standardization, streamlining and speed were the order of the day. One of the specific goals was to utilize people to make decisions and use available technology to support efficiency. They added automated money-counting machines, addressing machines, desk calculators, bookkeeping machines, Dictaphones, and photocopiers. The pinnacle of this technological upgrade was the use of punched card technology to convey financial data.

The information flow created by these innovations enabled management to monitor and control the bank's activities more efficiently and with more up-to-date information. Lower-level employees were empowered to communicate directly with customers, enhancing accountability and making these employees far more aware of their impact on the bank's performance.

Written instructions replaced oral instructions as the bank continued to systematize its operations. A company manual was published for the first time. Documentation began to include organization charts and process charts, clearly demonstrating the growing alignment of operational decision making criteria with the organization's strategy.

In summary, the first three elements of the authors' decision characteristics list were followed, but the fourth was not. In fact, lower-level employees were encouraged to be creative, involved, and to become more accountable for more important decisions.

In contrast, the Postal Cheque and Clearing Service (PCGD), the money transfer service of the Dutch national Post, Telegraph and Telephone Administration, experienced what can only be described as an operational meltdown following its poor implementation of new technology. In order to encourage public use, the organization had been decentralized, and fifty percent of its staff was located in local post offices. The explosive growth in public use caused already strained procedures to break down. Balances between local branches and the central office were frequently off, despite uniformity in processes between them.

In 1922, a newly appointed general manager approached the team that had implemented the punched card system at ROBAVER for advice. By the end of the year, the new technology was installed and a transition was planned for a weekend in August of 1923. Costs for the transition had to be minimized, so no shutdown was planned during the switchover.

The implementation was a fiasco. Technical staffs were not properly trained to maintain the machines. Trained male punch operators were replaced by untrained but lower-paid female staff shortly before implementation; the new staff generated errors on one third of all transactions. No procedures were in places to accurately capture the account balances for the current accounts. Erroneous information was entered for many new transactions. The new general manager authorized the internal control system to be bypassed to gain speed and save cost. Disgruntled customers produced so many complaints that within two months, the PCGD was shut down completely by the minister of Public Works, and it did not reopen for a year.

In terms of the authors' four-part framework, only the fourth was really accomplished. First, information flow in both directions was woefully inadequate. Much of the information that did flow upwards was ignored. The general manager even ignored the advice from the ROBAVER consultants, who told him the implementation was in danger a month ahead. Second, the lack of information flow, accountability, and communications made coordination and control an impossibility. And, the internal control system was abandoned when it was most needed. Third, the technology was treated as a silver bullet that would solve control and alignment problems. No one recognized that the alignment needed to happen before the technology could be successful. However, PCGD was successful in pushing strategic decision making to the very top of the organization. In fact, there seems to have been a complete disconnect between the primary decision makers and the entire rest of the organization.

The authors conclude that the first elements of the four-part framework are conducive to successful technology implementation, but the fourth is not. This implies that carefully applied systematic management is beneficial, but that scientific management must be treated with caution in this environment.

The implications of this article for practice are clear. Technology is *not* a silver bullet that by itself will solve organizational problems. It is merely an enabler for communication, information

flow and efficiency of transactional processes. When it is implemented without a careful review and alignment of processes with organizational strategy, it may only hasten adverse consequences.

The news is full of failed technology implementations, especially in government, where their visibility is a political embarrassment. For example, on March 8, 2005, the Federal Bureau of Investigation announced that it was scrapping its much-vaunted Virtual Case File project, after spending $170 million over almost four years (Information Week). Inspector General Glenn Fine of the Justice Department said that problems included "poorly defined and changing design requirements, lack of management oversight and rapid turnover in the FBI's technology executive ranks" (Eggen, 2005). This observation directly addresses at least two of the four decision-making elements.

It also shows that the general implications on organizational decision-making and organizational structure of new technology implementation are not fundamentally different just because the technology itself has advanced dramatically in the last twenty-five years. Planning, communication, empowerment and viable processes are needed as much now as ever.

REFERENCES

Eggen, D. (2005, February 4). Computer woes hinder FBI's work, report says: Mueller disputes watchdog's findings. ***Washington Post***, p. A15.

Information Week. FBI dumps botched computer overhaul. http://informationweek.com/story/showArticle.jhtml?articleID=159400512; March 23, 2005.

Nelson, D. (1974). Scientific management, systematic management, and labor, 1880–1915. ***Business History Review***, 48(4): 479–500.

Wijnberg, N. M., van den Ende, J., & de Wit, O. (2002). Decision making at different levels of the organization and the impact of new information technology - Two cases from the financial sector. ***Group and Organization Management***, 27(3): 408–429.

Yates, J. (1989). ***Control through communication: The rise of system in American management***. Baltimore: Johns Hopkins University Press.