Customer Feedback Management: Developing an Organizational Process of Information Use

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ABSTRACT
This best-practice poster presents an organization process for making efficient use of customer feedback comments. This process was developed to address a need of the Canadian Pharmacists Association (CPhA) in feedback management. The challenge lies with identifying issues related to feedback (information) use and developing a technological solution to address the issues. As a result of this project, the CPhA can better cope with volumes of feedback comments. This poster reports on the methodology, outcome and experience from a collaborative project between the CPhA and McGill University in Canada, and contributes to the topic of information use in two ways. From the practitioner’s perspective, our experience is valuable for undertaking similar initiatives of process innovation in organizational settings. From the researcher’s perspective, this study contributes to scientific knowledge by (1) demonstrating the applicability of Saracevic and Kantor’s (1997) Acquisition-Cognition-Application model to study information use at the organizational level, as opposed to information use by individuals, as well as (2) identifying three factors uniquely related to information use at that level.

Keywords
Information use, user feedback, organizational process innovation, organizational case study.

THE STAKEHOLDER AND PROBLEM STATEMENT
The Canadian Pharmacists Association (CPhA) publishes e-Therapeutics+, an online reference for clinicians, providing medical treatment recommendations. Clinicians can provide feedback comments about this resource while consulting it. Currently, the CPhA receives hundreds of comments every week. Because the comments can help optimize the content of the information resource (Tang, Bouthillier, Pluye, Grad, & Repchinsky, 2011), the editors at the CPhA feel compelled to screen them thoroughly to understand any reported problems and to make changes to e-Therapeutics+ content where appropriate. A pressing need emerged for efficient feedback processing.

PARTICIPATORY ACTION RESEARCH
Between McGill University and the CPhA, there is a participatory action research (PAR) program overseeing user feedback management in relation to e-Therapeutics+. Partners in the program decided to work out a better process to address the need. The PAR approach can meet both the stakeholder’s desire for practical insight (solutions) as well as the researcher’s interest in scientific knowledge (Ospina, Dodge, Foldy, & Hofmann-Pinilla, 2008).

RESEARCH QUESTIONS
Following the PAR principles, two research questions were meaningful to the stakeholder, aiming to improve feedback utilization.
1. What issues does the CPhA encounter in making use of clinicians’ feedback comments?
2. What process can be developed for the CPhA to facilitate the use of clinicians’ feedback comments?

RESEARCH DESIGN
Through a partnership of researchers and stakeholders, the purpose of PAR can be achieved by informing action with research findings (Burke, 1994). A process perspective based on the flow of information was deemed appropriate to examine how the CPhA has been dealing with feedback comments. That is, when a linear view of inputs and outputs can be clearly identified (i.e., something passes from A to B ending with C) and when the flow of information can be clearly targeted (Brown & Duguid, 2000). In the present project, clinicians’ feedback comments (textual data) were screened to identify those comments that were potentially constructive; these were then analyzed for problems with e-Therapeutics+ content, with a final stage of actionable
decisions on what content changes needed to be made. To substantiate the process perspective, we adopted an organizational case study methodology, which has been frequently used to evaluate organizational processes (Yin, 2003). This methodology requires the use of multiple sources of evidence, which are embraced by a general analytical (process) perspective (Yin, 2009).

Main Methods
While the researcher conducted data collection and analysis, stakeholder involvement was maximized, particularly during the development of a technological solution.

Structured Questionnaire
To adequately frame the scope of information use (i.e., from feedback data retrieval to making a change or a no-change decision), a questionnaire was constructed to capture tasks in the feedback handling process (e.g., store feedback data to be retrieved for further processing). Under each task, the researcher first described what was done in order to complete a task (e.g., “An FTP server stores the feedback data file, which is updated regularly.”) and then listed the items designed to clarify the activities and the tools involved in feedback handling (e.g., “What is the backup frequency/period, e.g., weekly?”). The questionnaire was created as a PDF form and then filled out by the CPhA staff involved in feedback processing.

Interview
Six clinical editors were interviewed to find out what they had done in response to 40 feedback comments that are representative of reported problems (Tang et al., 2011). Semi-structured questions guided the discussion: for example, “What did you do to identify the problem as reported in the feedback? What did you do to make the change (to e-Therapeutics® content)? Did you discuss this feedback comment with your colleagues?” Inductive thematic analysis (Braun & Clarke, 2006) of interview transcripts was performed to (a) clarify task objectives of feedback processing, and (b) reveal any issues encountered. Open-ended questions were also posed to explore opportunities of improvement.

Remote Observation
A critical but bottlenecking task of how feedback comments are screened by the Editor-in-Chief was closely observed through remote desktop software, because the researcher and the CPhA were not located in the same city. The task of screening feedback comments was observed for 45 minutes, during which the Editor-in-Chief remained on the phone with the researcher to explain what she thought might not be obvious through observation. Remote observation provided a microscopic view of the screening task which could not be attained in the interview.

Solution Development (Prototyping)
Evidence collected with the above methods provided detailed knowledge of exactly how the feedback comments were handled, and requirements for a new system could then be identified. A proposal was made with suggestions for improvement, many of which were expressed in operational terms. As the first step of developing a technological solution to handling feedback comments, electronic paper prototypes were used to confirm features and interfaces of a feedback management system. Eight interface prototypes were created as MS Word documents. The editors (i.e., users of the system) used “Track Changes” to make suggestions on the documents and then emailed them back to the researcher. A few iterations were completed before a system prototype (i.e., software application) was developed, which addresses the issues identified through the above methods. An all-hands meeting was held at the CPhA to demonstrate the system prototype. After this meeting, the researcher and stakeholders discussed factors to be considered for implementation.

RESULTS
The complete ‘life-cycle’ of a feedback comment was mapped into specific tasks performed by CPhA members. Actions for dealing with the information were scrutinized, which revealed issues that should be considered for improving the process of feedback handling. A technological solution was the final outcome.

Process Overview
The final ‘map’ of the feedback handling process consists of eleven tasks, starting from feedback collection to problem investigation and communication with external parties (e.g., chapter authors and reviewers), decision-making (i.e., change or no change needed), and finally implementation of a change to e-Therapeutics® content. Analysis of interview transcripts revealed three essential tasks: interpret – investigate – change/no change. Some characteristics of feedback utilization have been found pertaining to each of the three key tasks. For example, the clinical editors often need to critically re-examine the content and the way content is presented (e.g., the clarity of wording). When e-Therapeutics® content is in question, an investigation ensues. During the investigation, editors would sometimes bring the reported issue to the attention of the original chapter author so that it could be addressed in a subsequent version. The cognitive activities that occurred during task performance (e.g., the feedback was interpreted within the context of a whole chapter) became visible, along with the decision-making processes. For example, some no-change decisions were made during screening of comments while others were made only after investigation.

Key Issues
The following issues were identified with regard to the first research question:
• As a critical but bottlenecking task, the screening of comments for investigation must be streamlined.
• The individual editor often consults with others in order to cognitively process the acquired information in an adequate manner. In other words, knowledge exchange and transfer are required for adequate understanding to be achieved.
Once an investigation is triggered by a reported problem, the communication and collaborative activities have a complex nature of intellectual exchange. For example, one email thread might deal with single or multiple comments, and a thread could take from hours to weeks to resolve, involving both internal editors and the authors of e-Therapeutics®® chapters who are experts in the field and are external to CPhA.

The best course of action, after investigation, is determined by multiple factors such as collaborative decision-making and established business processes.

It can be challenging to effectively follow through the execution of a content change, as it involves a workflow that overlaps at various points with the editorial process.

The life-cycle of information (i.e., a feedback comment) does not end after a change is made to e-Therapeutics®® content. Systematic documentation of every instance of feedback handling for future consultation is an area yet to be adequately addressed.

Members of the organization have different ways of handling feedback comments and the information gathered for an investigation. Personal information management is idiosyncratic.

The processing of feedback comments passes through several members of the organization, each with a specific function to perform. Methods are required to relay information and coordinate between the members.

The overall efficiency of information use (i.e., from feedback collection to action in response to reported problems) is determined by the inter-dependency of all involved parties, both internal and external.

Technological Solution
To effectively answer the second research question, system prototyping led to a technological enabler that (a) supports the eleven process tasks and (b) addresses the issues identified above. The system also incorporated suggestions made by the editors:

- Operational interfaces coordinate the processing of individual feedback comments.
- Summary interfaces provide an overview of all feedback comments under processing.
- Feedback comments are organized per e-Therapeutics®® chapter to facilitate screening for investigation.
- A self-reminder helps to schedule follow-up activities of investigation and communication.
- A document organizer enables filing emails and research literature related to a thread of investigation.

Summary of Experience
Three issues represent our experience gained through this process innovation for improving feedback handling at the CPhA. They may be useful to practitioners engaging in improving information use within organizations.

1. With regard to the cognitive task of information processing, intellectual exchange between members within and outside the organization deserves the greatest flexibility and should not be bound to rigid regulation in terms of communication channel, style, or format.

2. It is beneficial to employ multiple sources of evidence (e.g., questionnaires, interviews, observations, and meetings) in examining information use in order to develop a solution of improvement, because each data collection and analysis method has its merits and limitations, and the combined utility of multiple evidence sources can help to attain a more complete picture of the organizational practice under study.

3. Contextual factors in the organization (e.g., staff workload, available resources) should be taken into account for a feasible solution to be developed.

CONTRIBUTION TO KNOWLEDGE
Saracevic and Kantor (1997) postulated an Acquisition-Cognition-Application (ACA) model of information use, where the notion of information is connected with cognition and intentionality of the user: cognition results in the state of a mind being affected by information, which serves to address the problem at hand. Of the three constructs, Acquisition is the process of getting information, Cognition the process of absorbing, understanding and integrating the information, and Application the process of using this cognitively processed information.

The ACA model was proposed using an example of library information use by individual scholars. Nevertheless, its three constructs are relevant to the study of information use at the organizational level, that is, information use linked to the mission of the organization. In this case, the CPhA uses feedback to optimize the content of information products which support the practice and continuing education of health professionals. In particular, feedback collection corresponds to Acquisition, investigation into reported problems corresponds to Cognition, and making changes to the information product corresponds to Application.

While the constructs can be mapped out in one organizational setting, the present case study suggests three factors not present in information use by individuals. Each of these factors represents a theme derived from the issues identified above, and is directly related to creating a technical solution for the CPhA.

1. Communication between multiple parties (e.g., internal staff and external chapter authors) plays an important role in the cognitive process (e.g., trying to understand the reported problem and finding the best solution).

2. Established business processes of the organization represent a major factor that determines the path of action (e.g., making changes to content).

3. There is a compelling need for tools to facilitate information use throughout acquisition, cognition and application processes.

These factors should be taken into account by researchers as well as practitioners in studying and improving information use in organizational settings.
PRESENTATION CONTENT
A poster provides the ideal format for showing the whole organizational process of user feedback handling at the CPhA, with eleven tasks presented along a (chart) continuum. This continuum is partitioned according to the three constructs of the ACA model. Listed under each partition are issues pertaining to the corresponding construct of information use. We invite discussion on (a) the applicability of the ACA constructs to the organizational setting, (b) the factors unique to study of information use in that setting, and (c) best-practice tips derived from our experience. A laptop will be used to demonstrate our (prototype) system alongside the poster.

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REFERENCES