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A "Tracking System" to Assure Quality and User Satisfaction

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Abstract
This article describes a "Tracking System" employed to organize an enterprise information system into a comprehensive system to ensure quality and customer satisfaction. Using database searches to locate past users of a service and identify previous users of a similar or related service, the Tracking System allows Extension professionals to efficiently deliver value to customers.

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Introduction

Extension, as a professional service provider, is faced with increasing economic and environmental pressure from competition, government, and rapidly changing technology. Many of Extension's practices that traditionally brought success in the past must yield to new paradigms.

Suggested paradigm shifts range from changing or improving Extension programs and processes (Kaplan, Liu, & Radhakrishna, 2003; Webster, 2003; Diem, 2002; Gallagher, 2002; Martin, 2002; Schauber, 2001) to completely recreating Extension (King & Boehlje, October, 2000). Regardless of the shift that ultimately occurs, one profound change is that Extension professionals must adopt a quality paradigm, one consistent with improvement of everything and everyone in the system.

Extension professionals have been instructed and admonished to understand user (client) needs (Koukel & Cummings, 2002; Cooper & Graham, 2001; Muske & Stanforth, 2000; Bazik & Feltes, 1999; Seevers, Graham, Gamon & Conklin, 1997). However, managing user value is one strategic practice that will differentiate successful Extension programs in the 21st century. According to Glenn Mazur, "To efficiently deliver value to customers, it is necessary to listen to the 'voice' of the customer" (1993). Various models exist to manage user value. To some degree, each of these models is characterized by principles beyond conformance; they embody a sophisticated understanding of user needs and market dynamics and facilitate deployment of value methodologies throughout an organization (ASQ, 2001).

Identification and Segmentation of Users

People who use services that are provided by Extension do not want to be treated alike. They have different needs and wants, and their needs and wants are constantly changing. In order for Extension to provide a strategic focus and respond more effectively to groups of either current or prospective users, Extension should identify and segment users (ASQ, 2001).

One of the more effective ways to identify users is through a user database. Database searches locate past users of a service and can help to identify previous users of a similar or related service.

Additionally, to organize a database into a comprehensive system to ensure quality and customer satisfaction, a "Tracking System" should be employed.

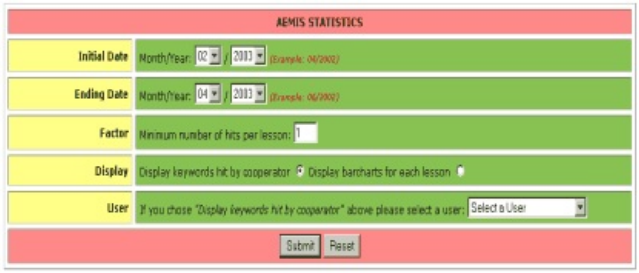
System Overview

The Agriculture Environmental Management and Information System (AEMIS) at Utah State University is an enterprise information system that will provide efficient and accurate access for agriculturists and farm producers to the latest information about manure management methods and tools for the livestock and poultry industry (Harrison, Kanade, & Toney, in press).

A log-in system is present that will allow users to have access to the information. Every user is given a username and password to log into this system. The username given to the user is unique to each user, and all information pertaining to the user is stored against that username. The information may not just be the user profile but also how the user has been traveling and doing search using the search engine. When an authorized user logs in to the system, the user-event information table notes the behavior of a user. For example, the system will record what keywords the user types while using the search engine. In addition, the statistics will also reveal which particular information was accessed for most number of times by the users.

Figure 1 shows the Statistics Query Page, where you can select the initial date and the end date between which you want to get the statistical information about the hits on the Web pages from the drop-down list. A keyword found is considered as a "hit." One can select the minimum number of hits in one particular lesson. There are two ways a report can appear: (a) hits by every "cooperator" or the user, or (b) hits by every lesson. If the former is selected, you can select the user whose hits you want to study in the next field. The drop-down list will provide the names of all the users currently registered in the system.

Figure 1.
Statistics Query Page



The result table is appended to the original query table as shown in Figure 2. With every topic number, the name of that topic, the number of hits in that topic from that user is displayed.

On selecting the "Display barcharts for each lesson" option from the Statistics Query page, we do not need to select the user name from the list because we would be studying the hits in every lesson.

Figure 2.
Statistics Report Page to "Display keywords hit by cooperator"

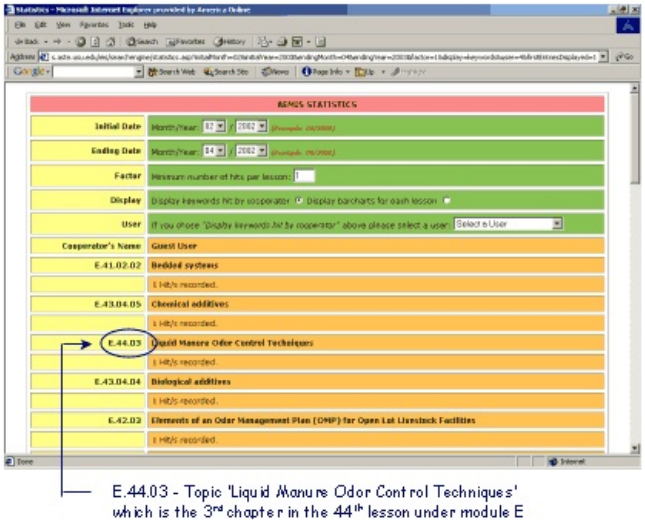
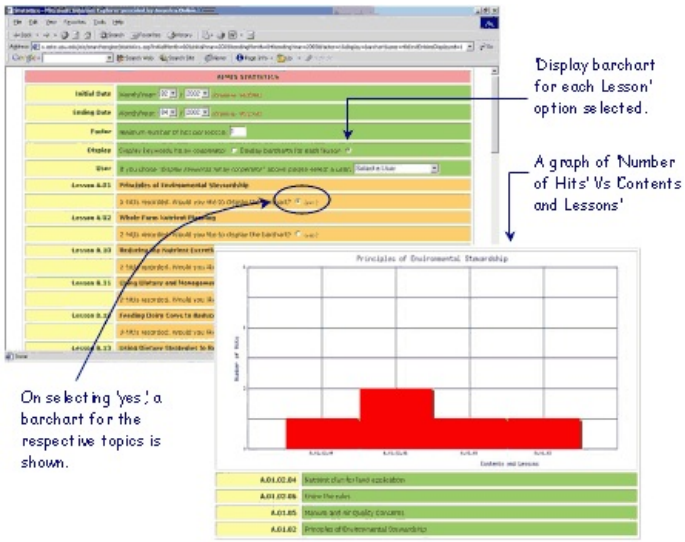


Figure 3 shows the total number of hits from all the users for every chapter with one or more than one hits recorded. Thus, lesson 1 from module A has 5 hits recorded in total. This number includes the sum of all the hits from the chapters in the lesson. The break down of the hits in the different chapters in the lesson 1 from module A can be seen graphically if you choose the "yes" option in front of each topics.

A break down for every content in the lesson is shown above. A graph (Figure 3) is plotted with

"Number of Hits" on the Y axis and "Contents and Lessons" on the X axis. Thus, it is apparent from the graph that the content "Know the Rules" has gotten the most number of hits in that particular lesson.

Figure 3.
Statistics Report Page Showing Barcharts for Each Lesson Selected



Summary

Over a longer period of time, if a certain topic is identified to be more searched than others, it can be the first topic to be researched, and more information on that topic can be stored in our database. One particular user may be following a particular trend that can be identified by studying the concentration of searches limited to a particular field, like, for example, Manure Management. Learning more about a specific farm, this user can be targeted with specialized information about Manure Management that may be found most useful towards making better decisions.

To access AEMIS, go to the Utah Agriculture Environmental Management System Web site (http://aems.aste.usu.edu) and sign up as a guest. Log-in and access information will then be provided.

References

American Society for Quality. (2001) *ASQ's foundations in quality learning series. Certified quality manager; module 4: Customer-focused organizations*.

Bazik, M., & Feltes, D. (1999). Defining your customer profile--An essential tool. *Journal of Extension* [On-line], 37(6). Available at: http://www.joe.org/joe/1999december/a4.html

Cooper, A. W., & Graham, D. L. (2001). Competencies needed to be successful county agents and county supervisors. *Journal of Extension* [On-line], 39(1). Available at: http://www.joe.org/joe/2001february/rb3.html

Diem, K. (2002). Using research methods to evaluate your Extension program. *Journal of Extension* [On-line], 40(6). Available at: http://www.joe.org/joe/2002december/a1.shtml

Gallagher, T. J. (2002). Employee participation in decision making in extension: A ladder of participation to reduce cynicism. *Journal of Extension* [On-line], 40(5). Available at: http://www.joe.org/joe/2002october/comm2.shtml

Harrison, J. D., Kanade, S. S., & Toney, A. H. (2004). Agriculture environmental management information system: An online decision support tool. *Journal of Extension* [On-line], 42(1). Available at: http://www.joe.org/joe/2004february/tt4.shtml

Kaplan, M., Liu, S. T., & Radhakrishna, R. (2003). Intergenerational programming in Extension: Needs assessment as planning tool. *Journal of Extension* [On-line], 41(4). Available at: http://www.joe.org/joe/2003august/a5.shtml

King, David A., & Boehlje, Michael D. (2000). Extension: On the brink of extinction or distinction? *Journal of Extension* [On-line], 38(5). Available at: http://www.joe.org/joe/2000october/comm1.html

Koukel, S. D., & Cummings, M. N. (2002). New Mexico Cooperative Extension Service home economists' perceived technical knowledge and estimated client needs. *Journal of Extension* [On-line], 40(5). Available at: http://www.joe.org/joe/2002october/a5.shtml

Martin, M. V. (2002). The roles of Extension in agriculture economics departments. *Journal of*

Extension [On-line], 40(5). Available at: http://www.joe.org/joe/2002october/comm1.shtml

Mazur, G. H. (1993). From voice of customer to task deployment. *QFD Institute* [On-line]. Available at: http://www.mazur.net/works/svctaskqfd.pdf

Muske, G., & Stanforth, N. (2000). The educational needs of small business owners: A look into the future. *Journal of Extension* [On-line], 38(6). Available at: http://www.joe.org/joe/2000december/a4.html

Schauber, A. C. (2001). Effecting Extension organizational change toward cultural diversity: A conceptual framework. *Journal of Extension* [On-line], 39(3). Available at: http://www.joe.org/joe/2001june/a1.html

Seevers, B., Graham, D., Gamon, J., & Conklin, N. (1997). *Education through Cooperative Extension*. Albany, NY: Delmar Publishers.

Webster, J. (2003). Bibliographies as an Extension outreach tool: An old method in a new age. *Journal of Extension* [On-line], 41(3). Available at: http://www.joe.org/joe/2003june/a7.shtml