Extension Education Methods

E-mail Discussion List is Rated Equal to Fact Sheets and Bulletins in Educational Value

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SUMMARY. A survey of e-mail discussion list participants found 84% rated the program as a valuable or very valuable educational tool. Most participants, 82%, thought it was equal to or more valuable than printed materials such as fact sheets or bulletins. Participants cite advantages as rapid response, unique, specific information not found in other

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sources, and a sense of connectedness to the Master Gardener program. Disadvantages include too much e-mail, frustration with participants who do not look up easy traditional questions, chitchat, and nonhorticultural postings. A summary of messages by subject shows tree and shrub questions are asked most often.

Electronic information took a major leap in the final years of the 20th century. E-mail, bulletin boards, chatrooms, and e-mail discussion lists (EDL) became commonplace in everyday life for business, education and pleasure. By the year 2002, the number of e-mail messages will total 8 billion (Hamilton, 1999). E-mail ranks with such pivotal advances as the printing press, the telephone, and television in mass impact (Hamilton, 1999). E-mail allows the immediacy of a phone call and yet gives the opportunity for reflection. Universities and cooperative extension have been early adopters in using electronic means to deliver information (Rhodus and Hoskins, 1996; Siegrist et al., 1998; Van Vranken and Cowgill, 1996), but few reports have been published on the value or educational effectiveness of electronic methods compared to traditional print materials.

E-mail discussion lists are groups of people who want to communicate via e-mail on a topic of mutual interest. The term LISTSERV (or listserv, list serv) is often used to refer to these groups, but is a trademarked name (L-Soft international, Inc., Landover, Md.). In these groups, one e-mail message is automatically forwarded to all members. The purpose of this report was to determine how and why users valued an EDL, how it compared to current educational materials such as fact sheets and bulletins, and to look at the number and type of messages posted over time.

Methods and materials

In September 1995, the University of Minnesota Extension Service developed a moderated EDL, <mastgar@extension.umn.edu> for Master Gardeners, (MGs). These paraprofessionals volunteer and assist cooperative extension in teaching horticulture. The goals of the EDL were to provide an efficient means of communication between MGs and extension staff, to assist MGs in answering questions and diagnosing plant problems, and to post administrative information.

Participants send an e-mail message to one address and the message is automatically forwarded to all members on the EDL. Messages are received as e-mail and are read at the

Table 1. Responses from 108 email discussion list participants on the value and use the list to learn horticulture.

Question	Response no. (%)		
Q1. How long have you been a list member?	<1 year 15 (14)	1–2 year 39 (36)	2–3 year 54 (50)
Q2. How would you rate this list as an educational tool?	Very valuable 44 (41)	Valuable 46 (43)	Somewhat valuable 18 (17)
Q3. Have you ever asked a question?	Yes 90 (83)	No 18 (17)	
Q4. If yes, have you received an answer to your question?	Yes 75 (69)	No 5 (5)	Sometimes 9 (8)
Q5. In comparison to other educational materials, such as fact sheets or bulletins how would you rate the list as an educational tool?	More valuable 24 (22)	Equal in value 65 (60)	Less valuable 19 (18)

Fig. 1. Email discussion list summary of messages over 3 years, 1996-98.

Fig. 2. Content and number of messages on the email discussion list over 3.5 years, 1995–98.

convenience of the participant. Only Minnesota extension state or county staff and active MGs are on the EDL and new members must be added through the moderator. About 80% of the members are MG volunteers; the remainder are county extension educators (agents) and state specialists. Questions are answered by MGs and extension staff, with no formal protocol, other than who has the time to provide the first correct answer or experience with the topic.

In January 1999, a five-question e-mail survey was sent to "mastgar" EDL members to determine their rating and value of the list. At that time, there were 311 members, 108 responded with completed, usable survey responses. The EDL is now on a Mailman (Mailman Software, Boston) software program on the World Wide Web with approximately 500 members, but at the time of this survey it was under a Majordomo software program. The survey answers were compiled and analyzed by using Statistical Programs for Social Sciences (SPSS, Chicago).

One of the original MG members of the EDL, compiled the numbers and content of messages over 3.5 years by sorting messages and using Microsoft Excel (Microsoft Corporation, Redmond, Wash.) as a spreadsheet.

Results and discussion

The five survey questions and answers are listed in Table 1. After calculating Chi-square tests to compare expected with actual responses of participants, no significant differences were found to correlate with the length of time a participant had been on the list. In other words, the length of time on the list was not related to a participant's valuation of the EDL. New members found it as valuable as long-term members. A large number of members post questions indicating the list is widely used.

Participants could comment on the EDL at the end of the survey. Some of the comments are listed below.

"I think the EDL is more valuable than a fact sheet because I often have specific questions that are not answered by fact sheets, bulletin, or book. I have been extremely impressed with the University of Minnesota faculty/staff in terms of their timely responses, the generous nature in which they share information, and the collaborative/partner spirit in which they share the information with us (I feel like a colleague or partner in the effort to extend the information/research generated by the university). I couldn't be more pleased with the relationship fostered by the list.

"I.... enjoy being able to keep in touch with what is going on in Minnesota while spending the winter in Louisiana."

"I notice that some questions posted could be answered by looking at our fact sheets, etc.—materials that the MG who has asked the question should already have. Would it be reasonable to "require" people who post questions to LOOK AT THEIR OWN MATERIALS FIRST?"

"It is a different type of educational resource - direct conversation if you will - instead of research material. I'm not sure you can really compare the two. I have found it helpful as well as enjoyable. Sometimes the comments made have given me a definite smile for the day."

"It keeps MG work alive in our daily experience and helps MGs become more aware of what others are doing. I look forward to seeing what's up every time I check my mail and I expect to learn something new. The only problem I have is trying to keep up!"

Participants are encouraged to refer to their resources and printed materials from the training classes and to search online resources before posting a question to the EDL. When new users post a question that can be easily answered with their resources, other members often remind them to "look it up" and cite the bulletin or online resource. Occasionally discussions get off-track, where postings first related to dog urine, they evolve to type of dogs and dog care. Members themselves police the EDL and usually call for removal of nonhorticultural postings after one or two messages.

As expected, the EDL showed an annual fluctuation with a greater number of messages in the growing season and an increase in messages over time (Fig. 1). Messages totaled 480 for 1996, 748 for 1997, and 1351 for 1998. Figure 2 shows the content of messages, by subjects taught in the Minnesota core course or MG training. Highest interest and questions were in the area of trees and shrubs, general horticulture or botany, and herbaceous perennials. These areas need to be thoroughly covered in the training since they generate a large percentage of the questions MGs are asked. MG organization included administrative items such as announcements about classes and workshops, reminders about upcoming meetings or events, and questions about volunteer hours.

Overall, participants indicated the EDL is a valuable educational tool. MGs have indicated the highest motivational factors for their volunteering and staying in the program are related to horticultural learning (Schrock et al., 2000). The EDL can partially fulfill this need by serving as an ongoing, daily contact with specialists and a source of horticultural information. As indicated, the list is also a means of "feeling connected" and in touch with what is happening in the program. For MGs who are in rural counties or in locations where there are few other volunteers, the EDL appears to provide a valuable link for the program.

An EDL is an efficient and economical means of communication. What was once a private plant diagnosis or observation by a specialist can now be shared over the listserve. Many MGs can be informed of any number of timely issues, such as: the status of aster yellows (high in 2000), effectiveness of beneficial nematodes for iris borer (mixed results to date), or the hardness of scabiosa in northern Minnesota (good). From this study, it appears that an EDL can be a valuable educational tool that has new and different features than traditional printed information.

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