

The Role of Intranets and Other e-Channels in Employee Communication Preferences

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Abstract—Analysis of survey results from 21 large organizations in the last seven years shows employees' preferred use of electronic channels may vary from commonly believed assumptions. As additional electronic choices become available, preference for electronic channels overall increases; the new electronic options do not replace other existing electronic channels in employees' preferences. In fact, growing preference for electronic channels reduces the preference for face-to-face communication, not print, as many people believe. Relatively few employees prefer exclusively electronic channels, preferring instead a combination of electronic and other sources, or just face-to-face sources, depending on the subject matter. Electronic channels that actively "push" information to employees' attention (e-mails and e-newsletters) are more highly preferred on most subjects than the passive "pull" sources where employees have to choose to go search for information (intranets, Web sites). About three-fourths are unwilling to give up printed employee periodicals in favor of exclusively electronic ones.

Index Terms—Communication research, employee preferences, electronic communication, intranet.

I. METHODOLOGY

THE results for this study are compiled from survey data at 21 organizations that contracted with the author to undertake customized research within their companies between May 1997 and August 2004. Data from a core group of 15 organizations is used for findings based on current and preferred information sources by topic because their surveys included a consistent list of eight subjects. The subjects were:

- Company goals
- Company financial results
- Company news
- Products and services
- Our competitors and how we compare with them
- Industry trends and news
- Employee recognition
- How I can help the company reach its goals

For each subject, the respondent could select up to two preferred information choices from a fixed list of options. Some chose one, some chose two. However, because they

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could not choose more than two, when more electronic sources are available in the list of options, respondents must "trade off" a preference for something else in order to choose an electronic option. In reality, employees might prefer a mix of three or more sources on a particular topic; for consistency in our research, we looked only at the top two.

A. How The Data Were Consolidated

Since the purpose of the surveys was to identify individual recommendations for each company, not pure research, the number of information source choices on the survey instrument varied quite widely to match each company's current and potential new information sources.

Some companies listed as many as 30 information source options; one listed as few as 16. When more options are available, this dilutes the percentage selecting any one option. For our data analysis, we added together all the individual sources selected within categories of information sources to enhance comparability of data across companies and to neutralize the dilution factor. The categories used were:

- **Electronic:** intranets (corporate, unit and departmental), mass-emails, electronic newsletters (corporate, unit and departmental) and the company's own external Web site on the Internet.
- **Face-to-Face:** supervisors, department heads, senior leaders, staff meetings, large-group meetings between executives and employees, colleagues, customers, vendors and other outsiders.
- **Print:** corporate and unit periodicals, brochures, letters, bulletin board postings.
- **Audiovisual:** closed circuit broadcasts, mass voicemails, videos, audio-tapes, 800-numbers to dial for company news updates.
- **Non-Company:** mass media, trade and professional journals, the World Wide Web.

Other variations on information source options included:

- Some companies did not have an intranet at the time of the survey.
- Some had multiple electronic newsletters, some from corporate and some from business units.
- Access to electronic channels varied due to the nature of employees' jobs.
- One company allowed respondents to choose up to three sources.

However, we consolidated all the relevant numbers in ways that made the comparisons among companies as meaningful and equivalent as possible.

B. *How We Will Present the Data*

Because all 15 core companies asked for preferred sources on the subject of Company Goals, we will use the responses to that question for testing several hypotheses about the factors that influence preferences for electronic information sources.

On other surveyed topics, we will show results only on a broader, trend basis to show how the preference for electronic sources changes by subject. However, since the number of organizations asking about those other subjects ranges from five to 13, it would be inappropriate to do deeper data cuts into those topics individually. Instead, for overall conclusions, we averaged the results for all eight subjects among all 15 core companies.

When we show these overall results, we will often report how the results varied by companies categorized in different ways:

- Companies where most employees work in an office environment (4), a manufacturing environment (5) or outdoors in the field (6).
- Companies with no intranet available to a significant number of employees at the time of the survey (5), those with an intranet but no e-newsletter (6) and those with both of the preceding channels available to the majority of employees (4).
- Companies in each of the previous categories are represented in each of the other breakdowns; for example, in each of the work category groupings is at least one company with no intranet, at least one with only an intranet and at least one with both an intranet and an e-newsletter. Although this was certainly not planned, it does help make the results more meaningfully comparable.

It is important to remember that although we are reporting consolidated trend data, the range of percentages on preferred data by company are widely disparate. In no way should these results be used by any single company to make decisions about its own internal communication channels without conducting research with its own employees first.

C. *The Companies in the Study*

Although the names of the organizations in this study cannot be disclosed due to confidentiality agreements, all but one are familiar names. Seven of the core 15 are on the US Fortune 500 list, another two rank in the top 500 list of global companies. Eight are international companies headquartered in the US and two are headquartered overseas (one in Europe and one in Asia), so the majority of the surveys included employees from Europe, Asia Pacific, South America, Africa and the Middle East.

The industries represented include: Telecommunications (3), Pharmaceutical (3), High-tech equipment and hardware (3), Financial services (2), Transportation (1), Oil/gas (1) and Government (1). The size of the individual organizations ranged from under 1,000 to 60,000 employees. The total number of employees to whom these results apply is 382,000. Other survey results for the entire 21 organizations apply to 459,000 employees.

At the 95% confidence level, the margin of error for each organization's results ranged between 2% to 5%.

II. PREFERENCE FOR ELECTRONIC CHANNELS VS. OTHER INFORMATION SOURCES

A. *Electronic Preferences Vary by Topic and Company*

For each of the eight topics examined in this study, electronic choices made up from 20% to 69% of the top two preferred sources. (However, because each respondent may choose two preferred sources, the maximum total is 200%.) The preference shifts dramatically from subject to subject, as seen in Fig. 1, and from company to company on the same subject, as seen in Fig. 2.

1) *Variations by Topic*

On average, electronic sources are most preferred on topics like Employee Recognition and Company News (60%-69% of the choices). However, the range among individual companies varies widely. For example, on the topic of Company News, only 15% of the selections were electronic at one company where most employees work in the field and very few have access to computers. At the other extreme, respondents' preferred electronic choices at another organization added up to 129%; at this organization, all employees work on computers and they have no recent history of a company publication.

Electronic sources are least preferred on the topic of How Employees Can Help Contribute to Company Goals (20%), where face-to-face sources are preferred to a much greater extent. However, electronic preferences on this topic ranged from a low of 3% at one company to a high of 36% at another—both of which have a large percentage of employees working in the field.

2) *Variations by Type of Company*

Although each respondent could choose either one or two preferred information sources for each topic, employees working outdoors and in manufacturing environments generally selected fewer sources (1.5 on average); office employees selected 1.75 options on average, indicating that non-office employees were more likely to prefer a single source on many topics.

Electronic sources were more greatly preferred, on average for all topics, by office-intensive organizations, followed by manufacturing companies and companies with many field employees working outdoors. The preference for electronic sources among office-based companies is about 50% higher than among those with many employees working outdoors.

B. *Exclusive Versus Inclusive Preferences*

With four of the organizations studied in 2001, we have data showing how many respondents used both of their top two preferred choices within the same category of channels: electronic, print, face-to-face, etc. (The available data don't show how many chose only one source, however.)

About 20% of respondents preferred exclusively electronic sources on the topics of Company Goals (18%), Company Finances (18%), Employee Recognition (21%) and Company

News (24%). Purely electronic preferences were lower on the other topics.

One-half preferred exclusively face-to-face sources on the topic of How I Can Help Reach Goals, and about 19% to 23% on Company Goals and Competition.

Very few respondents chose solely print sources as their top two choices on the eight topics being examined; therefore, we conclude that print seems to be a complementary source since the employees selecting a print choice as one of their two preferred sources generally chose a second source from a different category.

The implication for e-communication in business is that a relatively small percentage of employees is willing to rely exclusively on electronic sources, and only on a few topics. Also, on some topics, exclusively face-to-face discussion is still preferred by a significant, but less than majority, group of employees. Companies that are considering going completely electronic are not likely to convince their employees to use the electronic channels. Instead, their employees are more likely to remain uninformed because they will not be receiving information from their preferred people, print or audiovisual sources.

One of our clients discovered two years ago that understanding of company goals had dropped nearly 30 percentage points among field employees over a two-year period when the company had abolished all print channels other than a single, company-wide, quarterly magazine as part of a cost-cutting initiative. Arguably, the company reduced costs due to printing, but they also reduced their opportunity for employees to help them make money or reduce further expenses through better-informed decisions and actions.

C. Impact of Having More or Fewer Electronic Sources

1) Impact on Non-Electronic Information Sources

A widely held assumption among communication professionals and senior executives is that adding electronic channels reduces employees' desire for printed information sources. Our research showed that not to be the case.

If an organization introduces an e-newsletter, preference for it comes at the expense of face-to-face information sources (11% defection), not print, as seen in Fig. 3. We see the same trend for companies adding an intranet, but at a slightly lower defection rate (9%). Looking at individual topics, the defections from face-to-face preferences can be even larger. For example, on the topic of Company Goals, 20% of respondents migrated away from face-to-face in preference of the e-newsletter, and 17% in favor of an intranet.

Other survey results reinforce that the availability of electronic sources has little impact on employees' desire for printed information. The following results are based on five companies from 2001-2003 where we asked employees if they wanted their current publication to remain only printed, to be replaced by an electronic channel, or to be available in both formats. Only 8%-35% preferred solely an online publication. In total, an average of 75% of respondents preferred to retain a printed publication, with 32% saying they wanted it

available only in print and 43% saying they wanted it available in both formats.

To put these results in context, virtually all employees in two of these companies have intranet and e-mail access. Two have all their employees working in an office environment and the fifth one has a majority of employees working outdoors in the field. Four of the companies have large numbers of employees working in call centers.

Based on focus group research, this preference for print is often due to lack of time allowed on the job to surf the intranet and people's penchant for reading printed publications while commuting or waiting for customers, for example. In one company whose business is software development, employees strongly preferred to retain their printed bi-weekly employee publication for a number of reasons, including the fact that they wanted to stop staring at their screens from time to time.

2) Impact on Other Electronic Information Sources

When more electronic options were available at a company, respondents were more likely to prefer the electronic category of sources on the eight subjects overall. Because our survey allows respondents to choose up to two preferred information sources, the total preferences among all channels can add up to 200%. Keeping that in mind, it appears that each incremental electronic channel draws an extra 20% of choices, as seen in Fig. 4:

- In the absence of an intranet, 18% of the top two preferred information sources are electronic channels.
- At companies with an intranet but no e-newsletter, 44% of the top two preferred information sources are electronic.
- At companies with an intranet and at least one e-newsletter, 65% of the top two preferred information sources are electronic.

On average, about 25% of respondents chose the intranet as one of their top two preferences—if the intranet was currently available. Preference for the intranet remained about the same at companies that also had an e-newsletter.

Preference for mass e-mails actually increased as more electronic channels were available at a company, rather than decreased as one might expect. (The expectation comes from the high volume of complaints people have about an excess volume of e-mails, which we hear about regularly in employee focus groups.)

In the companies studied that did not have an intranet, 8% preferred mass e-mails on average for the eight topics studied. In companies where an intranet was available, but no electronic newsletter, the preference for mass e-mails jumped up to 17%. In companies with both an intranet and an electronic newsletter, preference for mass e-mails went up a bit to 22%.

Looking at results for the eight topics individually, intranets are slightly more preferred than either mass-emails or e-newsletters alone on six of the eight topics. However, on the topics of Company News and Employee Recognition, an e-newsletter is the single most preferred electronic source.

III. PREFERENCES AMONG ELECTRONIC CHANNELS

A. Satisfaction with Volume of Electronic Channels

Very often employees complain in interviews and focus groups about receiving too many e-mails. We asked ten companies' employees over recent years whether they were receiving the right amount of information through various types of information sources, too much or too little. On average, just under half (47%) said they were getting the right volume of information electronically, with the other half evenly split wanting more or wanting less. Two companies' individual results matched the average results. However, the findings for the other companies were not nearly so well balanced.

At two companies where most employees work outdoors away from computers, over half said they wanted more electronic communication. These results were from 1997 and 1999. However, at another similar company where a large number of employees work outdoors, but where virtually all have regularly scheduled access to computers as part of their work time, nearly half said in 2001 that they were getting too much information electronically.

In two organizations from 2003, while half said they received the right volume, the remainder did not split evenly between too much and "too little": 49% in one said they received "too much" and 35% at the other said they received too little. In another company, the majority (53%) said they received too little electronically. At another company, nearly two-thirds (65%) said they received just the right amount.

B. Characteristics Affecting Electronic Preferences

There does not seem to be a correlation between people feeling they receive too much information electronically and access to electronic channels, as seen in Figs. 5 and 7. There also does not seem to be a correlation between feeling that electronic channels are overused and how highly they are valued by respondents. Value was defined on the survey as providing information employees either want or need for their jobs (as opposed to a source being interesting but not useful, or one that should be eliminated).

There is no apparent relationship between either access or perceived value and respondents' overall likelihood of preferring the intranet as a source. This is probably because the number and nature of the topics surveyed at each company were so different.

Based on additional measures of other information channels at the surveyed organizations, the discrepancies in preferences for electronic sources does not seem to depend solely on the intrinsic value of the electronic channels themselves. Electronic preferences also seem to depend greatly on the number, availability and usefulness of other types of channels, such as effective and timely print sources and supervisors with high levels of appropriate communication behaviors.

C. The Impact of "Push" Versus "Pull" Electronic Sources

"Push" information sources are those that are proactively brought to an employee's attention. Among the electronic channels, these would be mass e-mails and electronic newsletters.

"Pull" channels are passive in that once the information is posted, it may never be noticed until someone affirmatively decides to browse to see if there is anything new of interest. These would include intranet and Internet sites.

On five of the eight topics examined in this study, respondents preferred "push" electronic sources to "pull" electronic sources at ratios ranging from 2:1 to 1½:1. On three other topics (Products, Competitors and Industry Trends) the ratio was nearly 1:1, showing that for these topics, employees are more willing to seek information at their own pace. For most topics, however, there is a higher preference for "push" sources that alert employees when there is something new they should know about.

As illustrated in Fig. 6, in the absence of an intranet, the preference for "push" channels jumps to 4:1. In the presence of an intranet, but the absence of an e-newsletter, the preference for "push" drops to ½:1.

From observations of many clients' communication programs and employee comments in focus groups, some of the more successful communication practices combine both "push" and "pull" approaches by sending e-mails or periodic e-newsletters with headlines and brief summaries of news with embedded links that let people jump to the intranet or company Web site for more details, if desired.

IV. EXAMINATION OF INDIVIDUAL ELECTRONIC SOURCES

A. Intranets

1) Role of Intranet in Overall Mix of Channels

At three of the surveyed companies, we asked what role the intranet should play in the overall mix of information sources. All three companies had a similar range of responses:

- Half the respondents wanted to have an intranet used as a communication tool, but not to the exclusion of other channels.
- Forty percent said they preferred to receive most of their information on the intranet.
- Ten percent said they did not want to receive any information through an intranet.

2) Frequency of Visiting the Intranet

Based on eight companies surveyed between 2001-2004, an average of 67% of respondents who have intranet access visited their intranets at least once a week or more often. The range ran between 16%-91% for individual companies. Nearly one-third, on average, visit the intranet once a month or less often.

Just under half of respondents (45%) at these eight companies said that visiting the intranet was part of their routine, on whatever frequency they visit. That percentage ranged from 42% to 61% at individual companies.

Forty-eight percent said they went to the intranet only when a need presented itself: either they needed some information they hoped to find on the intranet, or else an e-mail, newsletter or manager alerted them that something new had been posted that they wished to know about better.

3) *Why Some Employees Never Visit Their Intranets*

At one company we asked respondents who never visit the intranet to select as many reasons for their lack of usage from a list of options as applied to them.

The biggest reason by far shows the greatest weakness of the intranet as a communication tool. Fifty-nine percent said they do not have time to visit it. That is not surprising because an intranet is usually out of sight and, therefore, out of mind for many employees unless they need to look something up. Based on focus group research, employees say they are too busy responding to their phones, their e-mails, their supervisors, their customers and their paper in-boxes—where information is being pushed at them, often at a dizzying pace. The last thing they have time for is to search for even more information that they may or may not find to be of interest or a good use of their time.

Another one-fourth of respondents who never visit their intranet said that either it was too difficult to find information on the intranet or they did not know how to access the intranet. Another 15% said the information on the intranet was not relevant for them.

4) *The Value of Intranets for Employees*

Most intranets are perceived as valuable by an average of 85% of those who have access to them. The perceived value seems unrelated to access because, even in two companies where access was available to only half the employees, respondents with access found the intranet as valuable to them and their jobs as at other companies where intranets were almost universally available.

By company, the perceived value of an intranet does not appear to vary as much as printed and electronic newsletters do. From 76%-95% say the intranet either provides useful information respondents need for their jobs or want to have, which is a variation of 19 percentage points from the highest to lowest scores. Electronic newsletters' value ranges from 19%-89% favorable; printed newsletters' value ranges from 9% to 82%. This appears to be true even though observation of the intranets in question showed great differences in the type of content that was available, navigational ease, search engine capabilities and whether the home page of the intranet was the automatic opening page/welcome screen for employees' computer screens or if they had to type in a URL to get there.

In eight companies where we asked both the question of intranet value and volume of electronic information overall, the value of the intranet does not seem to be affected by respondents' feelings of having too much information provided electronically. In fact, respondents at the two companies whose intranets were rated as more valuable than the norm were more likely to say they were receiving too much information electronically; the two whose intranets were rated below the norm in overall value were at companies

where respondents were more likely to say they were receiving too little information electronically. Later in this article we discuss that perceived over-use of electronic communication also does not seem to correlate with the perceived value of mass e-mails.

When fewer employees have access to an intranet, fewer respondents overall will choose an intranet as one of their preferred information sources, probably because they have not been exposed to one and cannot judge what types of information it might provide. For example, at two companies where intranet access was 50% or below, less than 10% of respondents selected the intranet as a preferred source on any of the eight subjects in our study.

5) *The Value of Intranets for Organizations*

Though intranets are used primarily as information sources, they are also business tools that can play a large role in helping a company make money, or spend less. Results from seven companies from 2001-2004 show that from one-fourth to over one-third of employees overall report a number of ways in which using the intranet has helped their organization's bottom line:

- Over one-fourth of respondents overall said using the intranet has helped them save the company money (27%) or helped avoid making mistakes (28%).
- About one-third (38%) reported that the intranet helped make them more efficient or helped them answer customer questions (29%).

All these results vary widely among various demographic groups of each company's employees. For example, at one company, 57% of supervisors said the intranet helped them save time, which has a bottom-line value of improved productivity. At another company, 59% of call center employees said the intranet helped them talk with customers more knowledgeably, which is likely to enhance customer satisfaction and retention and, therefore, revenue.

B. *Mass E-mails*

1) *Impact of Access on Value of Mass E-Mails*

The norm is that 80% of respondents overall say mass e-mails provide information they either need or want (referred to as "perceived value"). Greater access to mass e-mails does not necessarily mean that more employees who have access find mass e-mails valuable, as seen in Fig. 7.

Four of the eight companies where we asked the same questions do find that access and perceived value track at the same high levels. However, at two companies only 60% and 74% of respondents with relatively high access found e-mails valuable.

On the other hand, though relatively few respondents (44%) at another company have access to mass e-mails, 77% of those with access said mass e-mails were valuable.

2) *Impact of Electronic Volume on Value of Mass E-Mails*

One of the survey questions asked at several companies was if respondents felt they were getting too much, too little, or the right amount of information through electronic sources, also illustrated in Fig. 7. The level of volume seems independent of

the quality of the e-mails received. Examining eight companies' results through 2004, respondents who were more likely to say they received too much electronically were as often above the norm as below the norm on how valuable they rated mass e-mails to be.

C. Electronic Newsletters (E-Newsletters)

Averaging all the responses to all the topics, it appears that about the same percentage (16%-21%) of respondents prefers each of the three main electronic information sources, as seen in the last bar in Fig. 8, although the proportions vary quite a bit by subject. However, access to electronic newsletters is significantly lower than access to the other two channels, as seen in Fig. 9.

A possible hypothesis, therefore, is that if e-newsletters were available to more employees, they would be the most preferred electronic source overall on the range of subjects we surveyed.

We looked at the percentage of times an electronic source was chosen as a preferred source relative to the percentage of respondents who had access to that source at each company. When we did, e-newsletters suddenly appear more highly preferred than the other electronic sources on half the topics examined in this study, generally those that cover where the company is going and how it (company and people) is doing in getting there.

The range of preference for e-newsletters varies more than the other electronic sources as well, also illustrated in Fig. 8. Excluding, for the moment, the one topic where face-to-face sources are preferred far more than any others (How I can help contribute to company goals), on various topics e-newsletters are preferred from 14%-50% of the time. Preference for the intranet has a much narrower range, 22%-28%, showing a more constant preference for the intranet on nearly all topics by about one-fourth of respondents. Preference for mass e-mails is very similar to the intranet, with only a slightly wider range.

D. Companies' Sites on the World Wide Web

Employees rarely (1%-4%) chose their own company's external Web site as a preferred source on these eight topics. The topics on which they were slightly more likely to look at the external Web site was on Products/Services, Company News and Company Performance. This preference was slightly more pronounced at two companies that were frequently in the news during the time of their surveys.

V. CONCLUSION

Further research using the same survey instruments will be able to provide a larger universe of companies with which to confirm some of our working hypotheses. Also, as more companies introduce and/or enhance their intranets and electronic newsletters, we will be able to track differences among the same companies over time.

Quantitative findings could be used together with qualitative research to identify examples of how employees

have used the intranet to accomplish desirable bottom-line outcomes. Then more employees could be encouraged to use the intranet in the same ideal ways.

Also, a Return on Investment could be calculated for these electronic channels using the focus group examples and multiplying the average cost saving or revenue increase times the number of survey respondents who report having experienced the same outcomes.

Finally, supervisors and executives could be encouraged to see that time spent on the intranet is not wasted time or entertainment time so that more employees could visit their intranets without being scolded by management. Based on our research to-date, having employees spend more time on their intranets and reading their e-mails and e-newsletters will actually reduce the amount of supervisors' and managers' time they currently need to get their questions answered.

ACKNOWLEDGMENT

We would like to thank the executives of our client companies who have had the insight to see that measuring the effectiveness of their communication programs can lead to using those programs to greater effect in changing employee behaviors to reach company goals more effectively.

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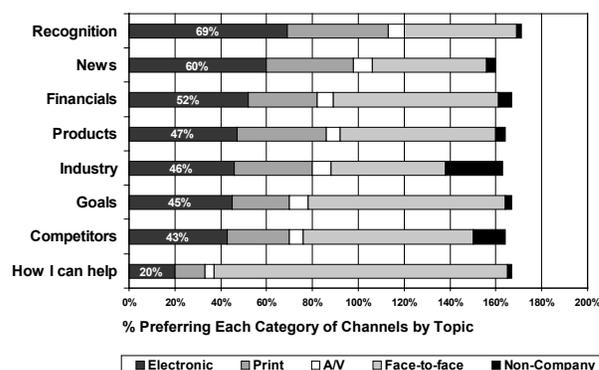


Fig. 1. While this paper often discusses overall averages, preferred

information sources vary quite significantly by topic. The averages should not be used to determine appropriate communication methods at any specific organization.

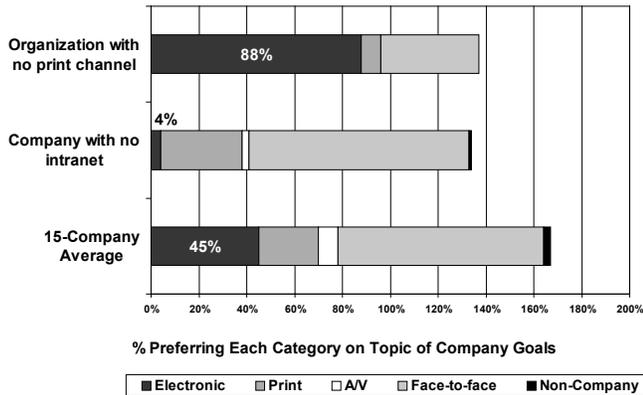


Fig. 2. Examining preferred information sources on a single topic, Company Goals, preferred information sources also vary quite a bit by company, as illustrated here by two companies with different current information sources available to employees.

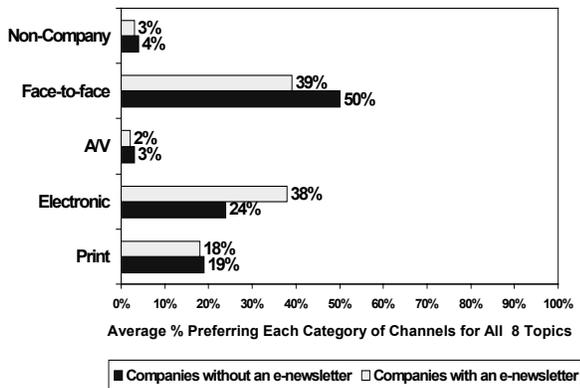


Fig. 3. Survey respondents at companies without electronic newsletters have a higher preference for face-to-face sources. Because our survey instrument allows only two preferred sources to be chosen, at companies with e-newsletters, respondents choosing that source must "trade off" another information source. Contrary to most people's assumption that an electronic newsletter would replace the desire for a printed newsletter, it seems that employees are more willing to forego talking to their supervisors if they can get the same information through electronic newsletters (which tend to be produced on a more timely basis than printed newsletters).

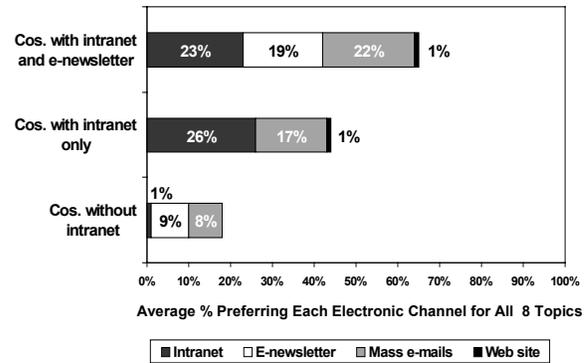


Fig. 4. In companies with more electronic channels available, the overall preference for electronic channels increases. Each additional electronic source does not seem to replace the desire for any other electronic sources. As more electronic sources are available, the preference for mass e-mails also seems to grow somewhat.

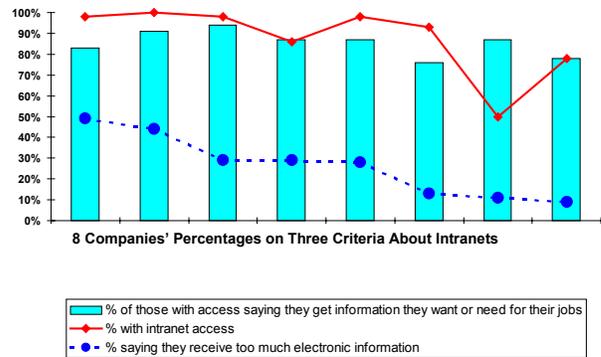


Fig. 5. The solid line at the top indicates the percentage of respondents who have access to an intranet; the dotted line shows how many respondents at these companies feel they receive too much information electronically. There doesn't seem to be a strong correlation between higher access to intranets and feeling overwhelmed with electronic communication since there is a variation of only 14 percentage points in access for the first six companies, but a 36-point difference in perceived overexposure to electronic communication. The bars show how many of those with access said the intranet provides information they either need or want. This perceived value of the intranet also does not seem to track with feeling overexposed to electronic communication.

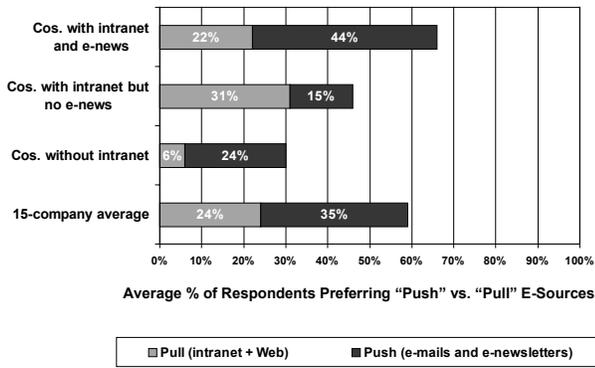


Fig. 6. Overall for all 15 companies on eight topics, electronic sources that push information to employees are preferred by a ratio of 1½:1 to passive electronic sources where employees have to choose to go there and pull information out. The ratio varies significantly by the types of electronic sources available at companies. Not illustrated here, the ratio also varies significantly by topic.

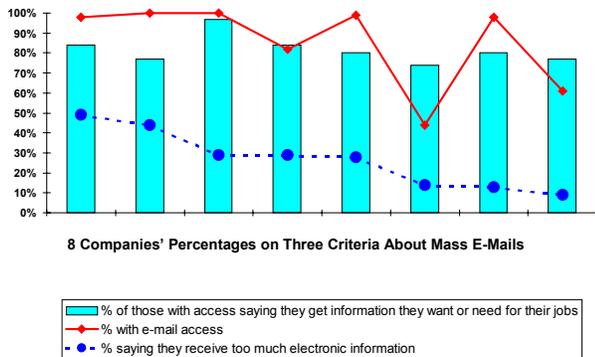


Fig. 7. The solid line at the top indicates the percentage of respondents who have access to mass e-mails; the dotted line shows the percentage who say they receive too much information electronically. Three of the companies have relatively high access to e-mails, yet relatively few respondents say they feel they receive too much information electronically. The bars show how many of those with access said mass e-mails provide information they either need or want. This perceived value of mass e-mails varies within a narrower range than the other two measures, and also does not seem related to feeling overexposed to electronic communication.

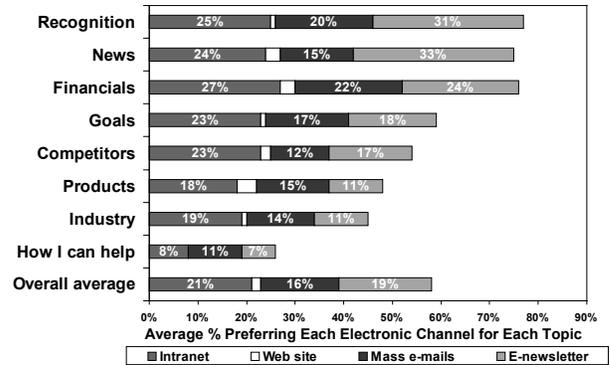


Fig. 8. The bottom bar shows that there is a fairly even split in preferences for the three main electronic information channels when we average results at all 15 companies on all eight subjects. However, there are great variations by subject, both in the total number of people selecting electronic options as a group and variations in the split among the channels by subject.

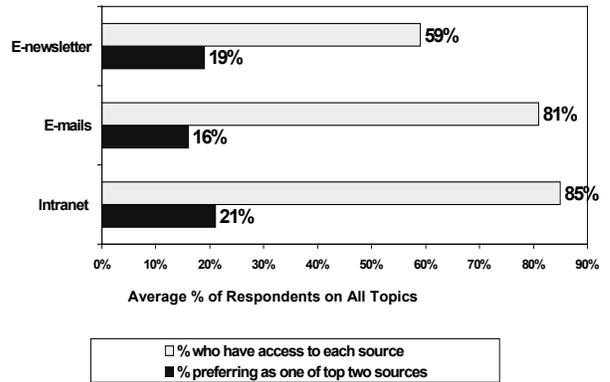


Fig. 9. This chart examines more closely the nearly even split among the three main electronic information sources on average for all companies on all topics that was illustrated in the bottom bar of Fig. 8. When we compare the availability of these electronic sources against their preferred levels, e-newsletters are far more highly preferred among those who have access than the other electronic channels are, which are available to far more people.