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# LEADING THE HORSE TO WATER

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## ABSTRACT

You're reading an abstract of a research paper. Is the abstract sufficiently relevant to make you want to read the whole paper? That's the question that we look at here. We start with an assumption: If the abstract doesn't grab your attention, you will skip the paper and go on to read another. To find out if our assumption is true, we asked two groups of people (a group of information systems professionals and a group that conducts research on information systems) to judge whether abstracts would entice them to read the article.

Unfortunately, we found little consensus in the literature about how best to measure the relevance of a paper or its abstract. We therefore ran an experiment to improve our understanding. In this experiment we used three dimensions of relevance based on the work of Benbasat and Zmud (1999):

- Important: the topic is important to the reader,
- Accessible: the paper is written so that its ideas can be understood, and
- Applicable: the reader can apply the paper his or her own work.

Our question was: Do people use these dimensions to determine from the abstract whether or not the article is relevant enough for them to read all of it? We created, validated, and ran a questionnaire to measure these three dimensions. We found that, for both practitioner and academic audiences, being important, accessible, and applicable are indeed significant indicators for reading an article based on its abstract.

Well, we've led you to the water, will you drink?

**Keywords:** Relevance, instrument development, abstracts, information systems research

## I. INTRODUCTION

The debate about whether or not IS research is relevant wages on at IS conferences and over ISWorld, a major listserv for IS researchers. In the winter of 1998, a special issue of the *Information Resources Management Journal* (IRMJ) focused on the relationship between academic research and valued practice. The papers in the issue reported many problems associated with business' ability to understand and apply the published articles by academicians [Saunders, 1998]. Some discussion focused on the relevance of the content, while other discussion addressed the delivery and usefulness of published articles. Worthy advice was provided about approaches to improve the situation, most of which would require a great overhaul of the way universities reward research.

In March of 1999, a special issue of *MIS Quarterly* (MISQ) addressed the same topic. The lead article posited several reasons for a perceived lack of IS research relevance [Benbasat and Zmud, 1999]. The discussion and following commentaries suggested that academic reward structures favor rigor over article relevance. Again, advice and a critique of the reward system followed, with some valuable ideas for improving the product. The claims and ideas were backed by a strong history of experience.

In 2001, a special issue of *Communications of the Association for Information Systems* (CAIS) published numerous opinion pieces on the same topic [Gray, 2001]. This collection of papers brought much heated opinion to bear on whether or not IS research is relevant to the practitioner, and even whether or not it should be. Much of the focus was on whether or not IS research fulfills its role as a knowledge provider for the world of business practitioners [Khanzanchi and Munkvold, 2001]. Numerous suggestions were provided, numerous defenses of our discipline launched, and many hackles were clearly raised. Some articles, however, offered views in breaking up this issue into more manageable dimensions of relevance.

Clearly, relevance in the field of information system (IS) research is of concern to many in academia and practice. The intent of this paper is not to continue the ongoing dialog, but to take one very small element and explore it more scientifically. In brief, we adopt a traditional IS research perspective by taking a few of the various dimensions of relevance and determining if a simple tool, the abstract, can actually promote an increased readership of academic research in IS. We focus on only one aspect of the ongoing argument, that journal articles intended to disseminate results are not read by practitioners (and often not by academics either). Many possible reasons for this lack have appeared in the ongoing dialog and are reviewed below, and many eloquent and comprehensive solutions have been proposed.

The path of this work is far simpler. This research examines the abstract as a way of convincing potential readers that an article is likely to be relevant for them, and whether that relevance leads them to read the article. Rather than addressing the issue of whether IS research is truly relevant, we explore whether we might improve consumption of our work through abstracts that contain certain elements of relevancy. The abstract serves as an important tool in the dissemination of research results and new ideas. The abstract often determines whether a paper will be read, a proposal will receive consideration, or an editor will have a paper reviewed [Witte, 2000]. Abstracts form a crucial component of

electronic databases, have been published separately as information sources, and serve as the only published component of papers at certain prestigious conferences. Thus, they are intended to give an accurate reflection of the contents of the work. As such, perceptions of relevance imparted from abstracts may lead to an increased intent to read published articles. Once led to the water, will a reader (particularly IS practitioners) actually drink from the knowledge. This research questions the old adage alluded to in our title.

## **II. BACKGROUND**

Targets of research may take several steps in determining which articles they will eventually read. There will be reasons for beginning a study of articles, either for a particular purpose or simply scanning for interest. There will be a selection of approaches for looking for articles, either browsing the library or formally searching through electronic databases. Many times an abstract will not even be read, other times it may be read based upon the whim of the reader for criteria known only to him. However, once read, what is there in an abstract that will lead the reader to then consume the article? This last step is the scope of this study, and only from the viewpoint of relevance.

Numerous views of the issue were brought out in the CAIS special issue, but a condensation of the arguments suggests that the nature of the audience determines if the primary reporting focus should be on furthering research or imparting valued advice. One primary dichotomy is considered to be the academic audience and the practitioner audience [March, 1991; D'Aveni, 1996; Alter, 2001; Khazanachi and Munkvold, 2001; Sein, 2001]. Outlets may vary for each of these two groups. In addition, content and style may vary. The academic audience must be convinced of the rigor of a study and the practitioner must be convinced of its applicability. Some believe that practical relevance is not an important criterion for academic journals [Straub, Ang, and Evaristo, 1994]. However, some works can have both [Mason, 2001]. This view is supported by a study that classifies journals into three types, those for

academics, those for practitioners, and those for both groups [Lau, Ang and Straub, 2004]. Lau et al. [2004] used abstracts, as well as full-length articles, to demonstrate that knowledge structures vary across academic, practitioner, and the hybrid academic-practitioner journals. For example, academic journals spend more time defining concepts and presenting external antecedents and negative consequences. Considering the problems and viewpoints of practitioners can serve to intellectually stretch researchers, perhaps into seeing new meanings in the studies [Truex, 2001].

We believe that both IS practitioners and academics read journal articles in order to further their knowledge and careers. While their perspectives may vary, both groups should be able to benefit from articles that they consider relevant. If IS researchers really want to disseminate their work to other academics and into practice, they need to understand how both audiences view their work. This requires that the same metrics be applied to evaluate relevance of IS research across academic and practitioner samples. Both groups may have the same relevance structure, just with different weightings for the dimensions measuring relevance.

Although many different views of relevance abound, they are all based on certain dimensions. Information quality researchers consider relevance to be an important consideration for an organization [Lee, Strong, Kahn, and Wang, 2002]. Heaps (1978) proposes a complex process for assessing relevance of data or documents retrieved by an information retrieval system that depends on the experience and memory of the person making the assessment. The COBIT framework contains elements to describe relevance in the overall evaluation of an information system [Boritz, 2005; Gelinias, Sutton and Fedorowicz, 2004]. These dimensions can be used to assess relevance across different target audiences. That is, the dimensions exist and are important to varying extents for different target audiences.

One set of dimensions designed specifically to question the relevance of IS academic research and articles is that proposed by Benbasat and Zmud [1999].

They formulated a definition of relevance based on *content* and *style*. *Content* represents whether the article is interesting; whether the knowledge presented is applicable, and whether the research issue is current. Currency and interest level vary by topic: Some topic areas are of immediate interest; some research topics are sufficiently advanced to be ahead of the game; and yet still other topics may be dated by the time the notorious publication lag strikes. *Style* focuses solely on accessibility, or the extent to which the research article can be understood by its target audience.

Other writers focused on similar dimensions of relevance. For example, Khazanchi and Munkvold [2001] discuss time frame as being critical in the impact an article may have, indicating currency is tied directly with the topic. Sein [2001] discusses research that is accessible, meaning the content can be understood by the reader and has a digestible style. Alter [2001] is concerned with article applicability and readability. Within a hierarchy of information qualities, Gelinias et al. [2004] defines relevance to include timeliness, which is related to currency. Historically, accessibility is considered a function of the background of the individual reader while applicability varies according to the audience [Henson and Means, 1997]. These key dimensions contribute to an understanding of how an abstract might be better written to attract a readership and may provide guidelines for making the research community findings more accessible to all stakeholders [Khazanchi and Munkvold, 2001]. These comments lead us to believe that there are at least three dimensions to relevancy. We label these dimensions accessible, applicable, and important where *accessible* means the article can be understood by a broad audience, *applicable* is whether or not an article provides some clue as to how to utilize the lessons learned, and *important* means the topic is currently significant to the real world. These are consistent with the terms used by Benbasat and Zmud, except we combine current and interesting into important, a structure we will test with the data we collect.

So why should this high level debate lead to a focus on the role of abstracts in motivating the audience members to read the article? From the viewpoint of

disseminating research results, authors want their work to be read. The type of audience may impact the selection of publication outlet. Whether the research paper is intended to reach an academic or a practitioner audience, it must attract its potential stakeholders to read, or at least provide an effective means to filter the irrelevant information [Amaravadi, 2001; Sein, 2001]. Often, people look over an abstract to determine whether or not they should read an article [Alter, 2001]. This is especially true in some electronic databases which offer free access to abstracts, but full text comes for an additional fee. At one time, for the express purpose of attracting practitioner readership, MISQ published an executive summary (a form of abstract) for each article.

Consequently, abstracts are important in attracting readers. To achieve this goal, the abstract must be clear, simple, and concise [Benbasat and Zmud, 1999]. By selecting something as simple as an abstract to assess an article's perceived relevance, we avoid complex issues in the discussion of IS research relevance, such as overhauling the university reward structure. Abstracts can be used to validate the construct, as shown here in a very exploratory fashion. Testing a simple tool is part of the great research tradition in IS, where the value of tools are evaluated in terms of meeting stated objectives.

### **III. INSTRUMENT DEVELOPMENT AND VALIDATION**

We focused our study on only one part of the process of finding and subsequently reading articles. In particular, we concentrated on the ability of an abstract to indicate certain dimensions of relevance and, consequently, heighten the intent of potential readers to read the article. First, a way to measure relevance in an abstract across different target audiences had to be developed. This research developed a relevance scale based on the attributes of being important, accessible and applicable as described above. Our primary focus is on relevance to the practitioner, though we do explore an academic sample to see if these dimensions exist, albeit to varying extents, in the two different samples. We anticipate that two audiences differ in their evaluations of relevance based on abstracts, but we

recognize that we must measure their perceptions of relevance uniformly across samples in order to more fully understand the phenomenon.

## **INSTRUMENT**

To promote content validity, we extracted a list of items related to the attributes of relevance from the articles in the special issues. For each dimension, we selected indicators that manifested it. As we found in the discussion of relevance in the special issue, the indicators were conceptually intertwined for each given relevance dimension. The list was then reviewed by four IS researchers to determine the appropriateness of the items. Twelve items remained for a pretest. Each item used a Likert-type scale from 1 to 5 where 1 is "not at all," 2 is "to a small extent," 3 is "to a moderate extent," 4 is "to a large extent," and 5 is "without any doubt." A twelve item instrument was administered to 51 students in a senior-level IS class. Currency and interesting items merged into one factor. Each student was given two abstracts of MIS publications to rate using the scale. Ten items (with the three predefined dimensions) remained (see Table 1). A final single item asked the sample to provide an intent to read the article on a scale of 1 to 5.

## **PRACTITIONER SAMPLE**

For our primary sample, we mailed the questionnaire to one thousand randomly selected members of the Association for Information Technology Professionals (AITP - formerly the Data Processing Management Association - the DPMA). This organization of information professionals was selected because of its nationwide membership and orientation to the technical IS professional. Whereas historically issue-based research drew on the responses of top IS management, the population used in this study was broader. The practitioners in our sample were asked to assess their intent to read the article after reading the abstract, as well as its relevance based upon their own needs and interests.

Table 1: Items Composing the Metric

Criteria	AVE	Composite Reliability	Alpha	Loading	Question(s)
Important	[.66] (.67)	[.89] (.89)	[.84] (.83)	[.68] (.67)	Q1. Does the article describe a characteristic or process that can be controlled within your organization?
				[.85] (.84)	Q2. Does the article focus on a key information management issue?
				[.88] (.90)	Q3. Does the article address a real world problem?
				[.85] (.83)	Q4. Is the topic timely?
Accessible	[.79] (.73)	[.92] (.89)	[.86] (.81)	[.93] (.93)	Q5. Does the article appear to be understandable?
				[.94] (.94)	Q6. Does the article appear to be readable?
				[.78] (.66)	Q7. Does the article focus on the application of the results instead of the research process?
Applicable	[.80] (.72)	[.92] (.89)	[.87] (.81)	[.86] (.72)	Q8. Does the article appear to be complete?
				[.92] (.92)	Q9. Does the article provide some advice or direction?
				[.90] (.90)	Q10. Does the article provide concrete recommendations?

Note: [ ] indicates IS practitioners; ( ) indicates IS academics.

One hundred and sixteen responses were returned for a response rate of 12%. The low response rate was anticipated due to the cognitive burden of the instrument, which required the reading of two abstracts and the thoughtful response

to questions about each. The survey was completed by IS managers, general managers, and IS professionals. The distribution of the survey respondents by management level, education level, and industry class is shown in Table 2.

Table 2: Characteristics of the Respondents

	IS Practitioners			IS Academicians		
Gender:						
	Male	85	73%	Male	64	58%
	Female	26	22%	Female	44	39%
Education						
	Graduate	59	51%	Graduate	111	100%
	Baccalaureate	39	34%			
	Some College	16	14%			
Position in Organization:						
	Professional support	56	48%	Full Professor	16	14%
	IS management	45	39%	Associate Professor	27	23%
	General management	13	11%	Assistant Professor	40	36%
				Doctoral Student	12	11%
				Unknown/Other	16	14%
Class of Organization						
	Service	60	52%	Education	109	98%
	Government	22	19%	Other	2	2%
	Manufacturing	17	15%			
	Education	15	13%			

*Note: Percentages may not sum to 100% due to omitted response items.*

A good variety was obtained. To remain consistent with the practitioner orientation desired of the one population, we removed all educators from this sample for further analysis. As a test for bias on the part of any demographic, an ANOVA was run with the three metrics (important, accessible, and applicable) as dependent variables and each demographic variable as the independent with breaks as indicated in Table 1. No significant relations were found (most significant p-values of .18, .38, and .08 for important, accessible, and applicable, respectively).

Specific abstracts were chosen to provide a variety of current articles from *Management Information Systems Quarterly* (105), *Decision Sciences* (102), *Information and Management* (42), *Journal of Management Information Systems* (117), *Information Systems Research* (63), and *Communications of the ACM* (114). The age of the abstracts ranged from three to 15 months at the time of mailing.

### **INSTRUMENT VALIDATION WITH THE PRACTITIONER SAMPLE**

Structured Equation Modeling (SEM) with Partial Least Squares (PLS) analysis allows empirical assessment of the measurement model used in this study [Chin, 1998; Löhmoller, 1988]. Using ordinary least squares, PLS performs an iterative set of factor analysis, and applies a bootstrap approach to estimate the significance (t-values) of the paths. In this study, PLS-Graph Version 3.01 [Chin, 1994] was used to verify the measurement and test the hypotheses.

Construct validity is examined in the measurement model. Individual item reliability can be examined by observing the factor loading of each item. A high loading implies that the shared variance between constructs and its measurement is higher than the error variance [Hulland, 1999]. A factor loading higher than 0.7 can be viewed as high reliability and a factor loading less than 0.5 should be dropped. In Table 1, the loading of all indicators are above 0.5, which indicates the measurement, is acceptable and significant.

Convergent validity should be assured when multiple indicators are used to measure one construct. Convergent validity can be examined by reliability of constructs, composite reliability of constructs, and average variance extracted (AVE) by constructs [Fornell and Larcker, 1981; Kerlinger, 1986]. Construct reliability can be assessed with Cronbach's alpha. Table 1 shows these and the other convergent validity measures. To obtain the composite reliability of constructs, the sum of loadings should be squared, divided by the combination of the sum of the squared loading, and the sum of the error terms [Werts et al., 1974]. Composite reliability and Cronbach's alpha are well above 0.70 which indicates high internal consistency. AVE reflects the variance captured by the indicators. If the AVE is less than 0.5, it means that the variance captured is less than the measurement error and the validity of a single indicator is questionable. The variance extracted for each construct is larger than the recommended 0.5. For adequate discriminant validity, the square root of AVE should be greater than the correlations of the constructs. The descriptive statistics in Table 3 show this condition to hold.

#### **IV. RESULTS**

The relationships among the variables are examined with the structural model. The explanatory power of the model can be evaluated by the  $R^2$  value in the dependent construct. The final dependent construct (intent to read) had  $R^2$  value of 0 .53. After computing path estimates in the structural model using the entire sample, PLS used a bootstrap technique to obtain the corresponding t-values. Each t-test corresponds to a path in the structural model for the data set (see Table 4). Support for each relationship can be determined by examining the significance of the t-value for its corresponding path. All t-values are significance at  $p < .05$ . Thus, in this data set, important, accessible, and applicable all have a positive influence on an individual's intent to read.

Table 3: Means and Pearson Correlations: IS Practitioners:

	Mean	No. of Items	Important	Accessible	Applicable
Important	3.35	4	<b>.82</b>	.52 (.000)	.41 (.000)
Accessible	3.03	3		<b>.89</b>	.57 (.000)
Applicable	2.43	3			<b>.89</b>

Note: diagonal represents the square root of AVE

IS Academicians:

	Mean	No. of Items	Important	Accessible	Applicable
Important	3.49	4	<b>.82</b>	.59 (.000)	.55 (.000)
Accessible	3.18	3		<b>.85</b>	.54 (.000)
Applicable	2.93	3			<b>.84</b>

Table 4: Regression Analysis

Independent Variables	Practitioners	Academicians
Important	.31*	.36*
Accessible	.39*	.32*
Applicable	.19*	.11*
Dependent Variable: Intent to Read	R-square = .53	R-square = .47

Note: \* indicated significant at p-value < .05.

## EXPLORATION OF AN ACADEMICIAN SAMPLE

The scale was developed with practitioners in mind, but many of the same items are significant to researchers as well. Like practitioners, researchers should also be attracted to read an article by the abstract. In addition, if academics are the primary authors of articles that may be read by practitioners, their views should be consonant to properly construct a consumable product [Zeithaml et al., 1990]. Thus, an additional sample was collected by requesting participation on a posting to ISWorld. Approximately 2500 IS researchers subscribed to ISWorld at the time of the study. One hundred and thirty-four academicians indicated that they would be willing to participate in the study. Three abstracts with an accompanying survey were sent to each academician who volunteered to participate. One hundred and eleven returned completed surveys, for a response rate of 82.8% among those who had agreed to participate, but less than 5% of the entire ISWorld list. The demographics of the academician sample are provided in Table 2, with the descriptive statistics in Table 3.

All structural equation parameters were of high magnitude and exhibited significantly high t-values. The results of composite reliabilities, and the variance-extracted measures are all shown in Table 2. AVE for the three attributes exceeded the recommended 0.50. Further, the composite reliability of all scales exceeded 0.80. All factor loadings were significant at the .01 significance level and thus, demonstrated the convergent validity of the constructs. Table 3 shows that the shared variance (the squared correlations) for each multi-item construct was less than the amount of variance extracted by the indicators measuring that construct, indicating the measure has adequate discriminant validity. The dependent construct had an  $R^2$  value of .47 (see Table 4). Support for each relationship exists at the  $p < .05$  level. Again, important, accessible, and applicable had a positive influence on individuals' intent to read. However, the values are different, indicating weighting between the two samples as a minimum consideration of how the two populations view relevance differently. Applicability may differ primarily in the perception of using the results in further research as opposed to organizational settings.

Table 5: Mean (simple average) Responses to Evaluation Criteria

	IS practitioners	IS academics
Important*	3.35	3.49
Accessible*	3.03	3.18
Applicable*	2.43	2.93
Average*	2.94	3.19

\*indicates a significant difference at the .05 level

Scale: 1 - not at all  
 2 - to a small extent  
 3 - to a moderate extent  
 4 - to a large extent  
 5 - without any doubt

Table 5 shows the practitioner and academician perceptions of the three relevance criteria. Overall scores for practitioners ranged from a low of 2.43 on applicable (between applicable to a small and moderate extent) to 3.35 on the important scale (between important to a moderate and large extent). The overall average ratings of article abstracts evaluated by the sample of academicians ranged from 2.93 for applicable, to 3.49 for important. The ranks for the constructs are similar for both samples<sup>1</sup>. There are no other studies to provide a benchmark for the relative values of these measures. On an absolute scale, these scores do not indicate a stellar performance on any measure, but do indicate a higher degree of importance than accessibility or applicability. T-tests on the difference between the two sample populations indicate that the practitioner sample rated all aspects significantly lower than the academic sample.

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<sup>1</sup> We also regressed the ten items on intent to read for each target audience. For both samples the same three items were the most important with similar weighting (i.e., Q2, Q4, Q6).

## V. DISCUSSION

The results do indicate that the dimensions derived from the work presented in the three special issues on relevance have substance, at least in the determination of relevance conveyed by the abstract of an article. The three anticipated factors (important, accessible, and applicable) emerged, though they likely do not represent an exhaustive list. Each of the three dimensions contributes to an intent-to-read in both sample populations. Still, the overall values of relevance are not strong. This result should be expected for several reasons.

Publishing delay is notorious in academia. If not for informal networks, conference presentations, and newer internet publications, the ability to meet a timeliness criterion [Khazanchi and Munkvold, 2001] is impeded. In addition, academic journals tend to be eclectic in that they address numerous topics, even within the same issue. Thus, random assignment of articles to readers should have an expected tendency to lower the perceived importance and applicability because of a simple mismatch of backgrounds and interests.

The ease of judging some items with limited information in an abstract would also tend to lower the perception of these measures. Due to space limitations in abstracts, even a well written abstract may leave out a component that identifies something of significance to a potential reader. This omission can create a false perception on the part of the potential reader. In particular, it is often difficult to convey the applicability of the research in a size-limited framework.

The differences between the sample populations should also be expected, at least until we become proficient at writing abstracts that target both populations. Just in applicability alone, the practitioner looks for advice that can be incorporated into a process or decision setting. Academics might find relevance in an article related more to the methodology. Academics are often satisfied with considering the results at a meta level, while the practitioners need to see a more direct application to a unique setting.

Each of these reasons should lead us to expect that the measures of relevance might be low, as indeed they are. However, it is clear that the perception of relevance does lead both academics and practitioners to consider reading the article. The regressions for both sample populations indicate that all three dimensions are important in leading one to the next step in consumption. The collective articles in the three special issues on IS research relevance contain many suggestions for promoting this end.

The results suggest that relevance is multi-dimensional and can be partially assessed by measuring whether an article is important, accessible, and applicable. The scale can also be applied to assess the relevance of IS articles for an academic audience. The ratings across the relevance dimensions for articles in well-regarded IS academic journals were higher for academics than practitioners (though the two samples rated different sets of abstracts). However, even the ratings of the academicians suggest that there is considerable room for improvement, especially in terms of applicability.

This study goes beyond the current debate of IS research relevance to examine the abstract relevance as perceived by readers and their subsequent intent to read. Using the dimensions suggested by Benbasat and Zmud [1999] and discussed by many others, the results indicate that perception of relevance does increase the intent to read. Lower values of certain attributes of perceived relevance signal why practitioners do not want to read academic journal articles. This result should not surprise researchers who believe that academic journals do not target practitioners, but to those believing that practitioners should read journals articles, the result of this study may provide one step in leading readers to the articles.

The abstract is clearly important in motivating both academicians and practitioners to read a journal article. Arguably, abstracts are gaining in importance in databases that only provide them and not the full-length article. In this fashion, writing a good abstract becomes a crucial step. The abstract is a key tool for attracting readers by demonstrating the relevance of an article. How

the abstract is presented and packaged must receive greater attention. An author should be certain that the abstract hits the major points of relevance. To achieve this, the discipline might turn to structured abstracts that have gained support in certain of the medical disciplines [Hartley, 2003].

An abstract should not be written as an afterthought to the paper. Rather, authors should carefully craft the abstract to convey the article's importance, accessibility, and applicability. Doing so may significantly increase the chances of having their work read by practitioners and academics alike. Therefore, working on improving the abstracts by stressing importance and applicability, and by improving their accessibility may be a valuable exercise no matter whether the intended target audience is one of academicians or practitioners. Targeting audiences requires an understanding of the needs of that particular audience which does not necessarily correspond to the views held by the authors. Editors may wish to provide abstract formats or simply abstract checklists that highlight the points of relevance common for the target audience of the journal. Unfortunately, practitioners who expect readability and direct applicability may not understand or be interested in the academic concerns and expectations posed in the abstract.

As a way to confirm interpretation of our results, we recently talked with the Editor-in-Chief of a monthly practitioner journal that has a CIO target audience. The interviewee had contacted one of the authors after having read the abstracts of a special issue on Standard Making that she had announced over ISWorld. The journalist has experience in writing for an academic and several practitioner journals. He regularly scans a broad range of sources for newsworthy stories and relies heavily on abstracts. The journalist sometimes repackages academic research findings for consumption by CIOs. During the hour-long interview, the journalist stated that most abstracts in the academic journals that he read were not helpful for his purposes. He volunteered three characteristics of good abstracts: they should describe topics of interest, the writing of findings should be clear, and the findings can be put to work. These three characteristics

correspond to our dimensions, important, accessible and applicable. To help him when evaluating articles for the relevance to his readers he suggested that the authors clearly indicate in their abstract “here’s what we found that is newsworthy that will change their jobs.”

## **VI. LIMITATIONS**

The results of our study raise more questions than were answered; such as, can practitioners effectively understand the academic abstracts and articles? Do we need to change how abstracts are written? Are there elements of technical writing that could be employed to improve the perceived relevance? What are other “criteria” (e.g., theories, research methods) for judging “article relevance” by academicians and practitioners? Do the same criteria apply to articles that seem to have substance in the abstracts? These are questions that can be researched, as can the overall perception of academic research by the practitioner, in a more traditional scientific fashion rather than through editorials of the various stakeholders.

Like any study, our study has limitations.

1. The practitioner sample selected. The use of AITP membership assumes that this is the practitioner audience MIS researchers wish to reach with their articles. Just as MIS researchers vary from practitioners in their publication desires, so are there are different audiences within the practitioner community.
2. Our relatively low response rate. Though the dependent variable was well distributed, it is possible that the practitioners who are inherently more interested in academic research were the ones who responded to our survey. Consequently, the relevance ratings may be higher than if the response rate had been higher.
3. Focus on only one aspect of the process: determining to read an article based on its abstract. In this study we did not consider such issues as the search for

articles/abstracts or how people decide to read an abstract. Surveys of potential readers may be useful in answering this question.

4. The level of analysis. Our focus is on the individual article level of analysis. However, it may be more appropriate to focus on the relevance of a research stream. Research tends to be cumulative. It may actually take several studies (and several articles) before applicable findings emerge.

5. A sample of primarily academic journals. Practitioners and academics represent clearly distinct populations and, therefore, different target audiences. Accommodating multiple audiences is difficult in any presentation, and articles published in academic journals should first target academics. This change in target audience may account for the differences in responses between the populations. However, all journals in our sample suggest their relevance to practitioner audiences. CACM and MIS Quarterly are listed as both academic and practitioner journals on the ISWorld database of journals. In its aims, *Decision Sciences* states that it is “read by over 4,000 faculty and students in all functional areas of business, as well as by corporate-related personnel and consultants”, while *Journal of Management Information Systems* “serves those investigating new modes of information delivery and the changing landscape of information policy making, as well as practitioners and executives managing the information resource” and *Information & Management* “serves managers, professionals, database administrators and senior executives of organizations which design, implement and manage Information Systems Applications.”<sup>2</sup> *Information Systems Research* states that it seeks to serve both the academic community of information systems researchers and practitioner stakeholders. In particular: “The executive and practitioner community is another important stakeholder for the journal... The review processes will emphasize relevance to practice and the organizational realities of information systems as equally

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<sup>2</sup> <http://www.decisionsciences.org/dsj/index.htm>, <http://jmis.bentley.edu/profile/>  
[http://www.elsevier.com/wps/find/journaldescription.cws\\_home/505553/description#description](http://www.elsevier.com/wps/find/journaldescription.cws_home/505553/description#description)

important along with academic rigor and theoretical contributions.”<sup>3</sup> Thus, while journals that are more clearly oriented toward practitioner audiences should be used in subsequent applications of the relevance instrument, we consider this initial sampling of journals to be an adequate starting place.

## VII. FUTURE RESEARCH

We only scratched the surface of examining relevance by asking samples of practitioners and academicians about their intent to read an article based upon its abstract. With the framework and scale described, more rigorous examination can be made of the arguments in the special issues of late. For example, one point of interest was the repeated equation that relevance and rigor represent a tradeoff [Benbasat and Zmud, 1999; Applegate and King, 1999; Robey and Markus, 1998]. This could be studied by classifying several journals in terms of their rigor and seeing if there is any significant relationship between rigor and relevance across journals. The limited data in this set found no significant differences in journals, but then again we only included a spectrum of well-respected academic journals articles and no trade journal articles.

Other key hypotheses also should be tested. This includes using communication theory to test the differences in perceptions between audiences. Expanded samples and more journal variety could serve to fill out the results of this study. Further, certain aspects about the abstract can serve to motivate various audiences. For example, Lau et al. [2004] found that practitioner journals tend to discuss internal inhibitors such as increased organizational risks. Future research could test whether failure to mention internal inhibitors in the abstract leads to a greater likelihood of the article being read by a practitioner. The emergence of strong dimensions of relevance across two different samples suggests that such research is warranted.

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<sup>3</sup> [http://isr.pubs.informs.org/editorial\\_statement2.htm](http://isr.pubs.informs.org/editorial_statement2.htm)

Lastly, abstracts are not the only components of papers that may be manipulated in order to generate interest and increase perceived relevance. The introduction of a paper is used to motivate the topic and place it into perspective of the research question. The end materials contain summaries of the results and discussion of the importance of the results. These sections might also be explored to determine the impact an article might have to practice and further studies in the field. Again, will practitioners look at conclusions more critically in terms of application advice, and will the scientific requirements of limiting conclusions to the boundary of the data lessen the impact to application that looks for extrapolation of meaning into applied domains?

## VIII. CONCLUSIONS

This paper examines the question: Does reading an interesting abstract make you want to read the whole paper? We started with the assumption that if the abstract doesn't grab your attention, you will skip the paper and go on to read another. To find out if our assumption is true, we asked two groups: (1) information systems professionals and (2) researchers on information systems to judge whether abstracts would entice them to read an article. We asked questions about perceived relevance based on the work of Benbasat and Zmud [1999], including if the article seems to be:

- Important: the topic is important to the reader,
- Accessible: the paper is written so that its ideas can be understood, and
- Applicable: the reader can apply the paper his or her own work.

We created, validated, and ran a questionnaire to measure these three dimensions and found that, for both practitioner and academic audiences, being important, accessible, and applicable are indeed significant indicators for reading an article based on its abstract.

This is important because, in general, business people do not read academic journals, or most practitioner literature either [Mintzberg, 1973]. This does not

imply that research is irrelevant to practice: Judging IS research relevance based upon the lack of practitioners' consumption of IS research is an unjustifiable leap of inference. However, if research is relevant, it should be desirable to entice practitioners to consume the product [Alter, 2001; Markus, 1997], for as Sein [2001] argues, "as long as a segment of practice read academic research, the knowledge becomes available to the community". This view is echoed by others who argue that researchers should pursue good science which leads to new understanding and practical solutions to critical problems while packaging the results in a manner suitable for consumption [Amaravadi, 2001; Mason, 2001]. A handful of practitioners or consultants who read academic journals can then disseminate the research findings to other practitioners.

What kept arising throughout this paper is a focus on target audience. Writing for the target is absolutely crucial [Henson and Means, 1997]. Should journals have two targets, as clearly indicated by the mission statements and editorial practices of many top academic journals, then catering to both audiences in writing and content is also a must. Perhaps this study and the discussions in the many recent articles on research relevance indicate an evaluation of the goals for each journal by its governing body. If the goal of addressing two audiences misrepresents the true mission of a journal, then changes to editorial policy and mission are mandated and overdue. If joint audience goals are worthy, the editors should require authors to make more effort to address both audiences in their articles, or open their publications to multiple forms of articles, some for academics and some for practitioners. Other devices might also prove appropriate such as executive briefs to accompany each article, allowing identified speculation in providing advice to practitioners, or even simultaneous publication of articles on the same study aimed at each audience identified in the mission of the journal.

### **ACKNOWLEDGEMENTS:**

We appreciate the input of IS faculty on our ISWorld survey.

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EDITOR'S NOTE: The following reference list contains the address of World Wide Web pages. Readers, who have the ability to access the Web directly from their computer or are reading the paper on the Web, can gain direct access to these references. Readers are warned, however, that

1. these links existed as of the date of publication but are not guaranteed to be working thereafter.
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