

An Exploratory Examination Of The Knowledge Transfer Of Strategic Management Concepts From The Academic Environment To Practicing Managers

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“... when an academic field has as its charge the thoughtful preparation and guidance of practitioner professionals, and when an academic field deals in a domain that vitally affects societal well-being, then that academic field must enter the world of practical affairs. Without being co-opted, it must strive for influence and impact. That is our challenge. We should matter. We must matter” (Hambrick, 1994: 70).

The above quote is taken from an Academy of Management Review article reporting the content of the 1993 Academy of Management Presidential Address by Donald C. Hambrick, entitled “What if the Academy Actually

Mattered?”. Hambrick (1994) was not the first to call for an assessment of the relevance of academic thought to management practice (for example, see Thomas and Tymon, 1982; Oviatt and Miller, 1989; Daniels, 1991). In the five years since his speech to the Academy of Management, several of his suggestions have been implemented, such as more widespread dissemination of research findings of Academy members through a public relations agency, but whether they have achieved their intended purpose is uncertain.

The current study is an exploratory effort to assess whether the work of the academic community has significantly influenced the practice of management in business organizations. Although the study is limited in its scope, we hope the results will provide some evidence of the degree to which the academic discipline of management shapes decisions of practicing managers. The study's aim is directed at answering three basic questions: What is the primary source of major management concepts for practicing managers? Are practicing managers familiar with key concepts and frameworks used in the academy (used in this study to convey the academic generation of knowledge instead of the academic environment)? How useful are several key academic concepts and frameworks to practicing managers in their decision-making processes?

The remainder of this study provides a working definition of knowledge, develops a knowledge transfer model, describes our research methodology, provides results, offers a discussion and some tentative conclusions.

WHAT IS KNOWLEDGE?

In current management literature, a distinction is made between two kinds of knowledge (Prusak, 1997). Information includes knowledge in the form of facts, axioms and symbols (Kogut and Zander, 1992), while "know-how" is defined as accumulated practical skill (von Hippel, 1988; Prusak, 1997). Machlup (1983) defines information as a flow of messages or meanings that might add to, restructure or change knowledge, and Nonaka suggests that "know-

edge is created and organized by the very flow of information, anchored on the commitment and beliefs of its holder" (1994: 15). Cognitive psychology differentiates between "declarative knowledge" (facts or justified true belief) and "procedural knowledge" (scripts or "how-to" knowledge) (Paris *et al.*, 1983). Similarly, in educational medicine, Bordage and Lemieux (1991) indicate that physicians use syntactic theory to capture the rules of inclusion of symptoms and signs (similar to declarative knowledge) and semantic theory to capture the meaning assigned to the symptoms and signs (similar to procedural knowledge). Nonaka (1994) suggests that the semantic aspects of knowledge are most important when considering building a theory of knowledge creation.

In summary, the above explication of the knowledge concept suggests two distinctive characteristics of knowledge: a procedural element and a declarative element. Assessing practitioners' *familiarity* with concepts and frameworks of management addresses the declarative element of knowledge, and evaluating the *usefulness* of these concepts and frameworks to practitioners considers the procedural element of knowledge.

In the next section we develop a model to evaluate the three questions associated with this study: What is the primary source of major management concepts for practicing managers? Are practicing managers familiar with key concepts and frameworks generated in the academy? How useful are several key academic concepts and frameworks to practicing managers in their decision-making processes?

A THREE DIMENSIONAL KNOWLEDGE TRANSFER MODEL

The three dimensions of this model are *Sources*, *Familiarity* and *Usefulness*.

SOURCES

Individuals acquire knowledge from a number of *sources*. In a summary of the literature on learning structures, Weisman and Anthony (1999) concluded that there are four ways that knowledge is transferred: *involvement* (participation in learned organization such as trade societies), *association* (formal or informal interactions with others), *experience* (knowledge acquired through implicit learning), and *direct education* (formal learning pursuits).

Involvement entails knowledge acquired through direct participation in professional organizations. Boisot (1995) characterizes involvement as "proprietary" knowledge. Proprietary knowledge is "knowledge that a person or group codifies on its own in order to make sense of particular situations" (Choo, 1998: 11). The current study focuses on the group aspect; that is, professional organization, industry guild, consortium or any other purposeful organization of individuals in a homogeneous profession.

Association involves knowledge acquired from formal or informal interactions with others in everyday activities, exclusive of a learned organization or society. This sub-dimension captures the essence of Miller's (1996) interactive dimension of knowledge that emerges as a result of relating with others in an organization. It is a deliberate attempt to learn through these associations. The knowledge source may be an internal group

of individuals or a single source, such as a confidant whose opinions may be highly valued (McCallum, 1998). *Association* involves largely informal means of communication and the exchange of information which is not always clearly defined.

Experience results from knowledge gained through implicit learning and usually occurs without the learner being cognitive of the learning process (Raelin, 1997). This knowledge is acquired through years of interactions with the learner's acquaintances, friends, colleagues and the like (Choo, 1998). However, the learning is implicit and not deliberately or explicitly sought or recognized as in the case with *association*, and includes commonsense and personal knowledge. Choo (1998) argues that this type of knowledge is acquired over time and is unique to each individual. Support for this description of *experience* is found in Miller's (1996) description of synthetic learning. Miller suggests that the synthetic mode takes place in the individual's mind, as opposed to involvement with others.

Direct Education represents knowledge obtained through formal learning pursuits, and is similar to Boisot's (1995) public knowledge. Choo (1998) describes public knowledge as being "codified" and "can be found structured and recorded in textbooks, research journals, and other formal and informal printed sources" (1998: 110). Miller's (1996) mode of analytic learning involving the systematic gathering of information is characteristic of *direct education*. The implication is that the type of knowledge gathered in a systematic fashion has to be readily accessible and highly codified. We extend the definition of *direct education* to include knowledge gained through for-

mal classroom instructions or other direct access to formalized instructions.

FAMILIARITY

Familiarity refers to specific knowledge someone has about a phenomenon (Goodman and Leyden, 1991). Stored images or representations in memory are evoked by stimuli to determine whether stimuli attributes match stored images or representations (Christie and Klein, 1995). Information may not reside in memory for any length of time unless it goes through three stages: *sensory memory* (perception of information), *short-term memory* (i.e., working memory and involves consciousness of the present), and *long-term memory* (encoding through practice and rehearsal) (Atkinson and Shiffrin, 1968; Bernstein *et al.*, 1991).

The literature regarding absorptive capacity also provides another vehicle for exploring the *familiarity* dimension. Although absorptive capacity is generally expressed as an organization-level construct, Cohen and Levinthal (1990) suggest that the concept stems from an individual level. They state that "prior related knowledge confers an ability to recognize the value of new information, assimilate it and apply it to commercial ends" (1990: 128). Since prior related knowledge enables an individual to recognize new information, the *familiarity* dimension can be defined more specifically as the extent an individual's prior related knowledge is affiliated with the relevant knowledge concept.

USEFULNESS

Usefulness "implies ways of resolving a problem through clarification,

alternation, or actual solution" (Taylor, 1991: 221), and is based on an attitudinal perception of the effectiveness of applying specific information to resolve a problem or to make a decision. Information is *useful* if it is appropriate for the situation in which it is used (Mangaliso, 1995). Choo (1998) contends that selection of information depends on the degree of relevance the user attributes to the information.

METHODOLOGY

FOCUS GROUPS

Our literature review revealed no previous research on knowledge transfer from academic to practitioner environment. Therefore, we decided to use focus groups as a means to design and confirm the model in the study (Reichardt and Rallis, 1994). We began by constructing a survey draft. Next, we used five focus groups to discuss the draft. The modifications made to the final draft didn't affect the content of the draft; however, we re-phrased several questions to improve readability, and made some grammatical improvements. (A detailed review of the focus group procedure is available from the authors upon request.)

SAMPLE COMPOSITION AND QUESTIONNAIRE

A questionnaire was constructed and mailed to 1,900 individuals, and follow-up postcards were mailed out four weeks after the initial mailing. The sample was obtained from a database of a college of business in the Southeastern U.S. The database was used for various purposes by the college including mailing of informa-

tional newsletters and publicity statements. The sample included 600 CEOs in the public and private sectors of Florida and Georgia, 100 Florida government officials, and 500 MBA graduates from the college who held executive positions throughout the country. Of the 1,900 mailed surveys, 323 were returned due to incorrect addresses and 46 were returned because individuals declined to participate in the survey. A total of 174 usable responses (11%) were received and used in the current study. Since the surveys were mailed out during the Christmas season, the 11% response rate did not create a major concern (Alreck and Settle, 1995). A mailing during a non-seasonal time of year would likely have increased the response rate. Some of the demographics of respondents include the following: (1) 49.7% classified themselves as top managers and 31.2% as middle managers, (2) 77.6% were male, (3) 92% possessed a bachelors degree or higher and 52% possessed a masters degree or higher, (4) 96.7% were between the ages of 25 - 65, and (5) 85% had at least 11 years of work experience.

The questionnaire was divided into three major areas: 1) construct familiarity, 2) construct usefulness, and 3) respondents' source of construct/concept acquisition. These concepts were selected by conducting a content analysis of article keywords taken from all 1994-1998 issues of *Harvard Business Review*, *Sloan Management Review*, *California Management Review*, and *Academy of Management Executive*. These journals were chosen for two reasons. First, they are designed for, and read by, professional managers. Second, these journals are more likely to contain academic concepts than the popular business press since they are primarily

written by academics and many articles are practitioner-oriented translations of scientific studies. The content analysis identified nine prevalent strategic management concepts: (1) resource-based views, (2) dominant logic/product relatedness, (3) globalization issues, (4) knowledge creation and information flows, (5) supply-chain management, (6) inter-organizational relationships, (7) formal business planning, (8) attention to environmental issues, and (9) governance issues. Each concept, and its related premise, is presented in Appendix A.

Twenty statements were developed by the authors in the survey draft and modified after focus group input to address the nine academic constructs. These twenty statements were repeated in each of three sections (*source, familiarity, usefulness*) of the questionnaire. In an effort to ensure respondents would share common definitions of the constructs, each statement was worded in general business terms. For example, the statement "Outsider board of director members are more stringent monitors of management's actions than insiders" was used in assessing the agency construct. Twelve ordinal categories were provided for respondents to identify knowledge *sources*. A five-point Likert scale was used to assess respondents' *familiarity* with the nine concepts. However, input from focus groups suggested respondents would need more latitude to discriminate the *usefulness* concept. Therefore, a seven-point Likert scale was used for *usefulness*. The initial survey was field tested with a group of MBA students and an expert in survey design. The field test provided valuable comments that were used to refine the survey instrument.

The twelve potential *sources* of knowledge acquisition were clustered into the four categories of the study model. This was accomplished by each of the four authors independently assigning each *source* option from the survey to one of the four categories (*involvement, experience, association, and direct education*). When individual categorizations were compared, there was general consensus (see Appendix B).

In an effort to validate the constructs underlying the survey items and to simplify data analysis, a factor analysis using varimax rotation was performed on the twenty *familiarity* items. Analysis of the scree plot revealed nine factors (constructs) with eigenvalues in the 3.00 to 0.94 range. All items loaded neatly ($> .48$) on the constructs of interest. Therefore, the twenty survey items were deemed to represent the nine designated constructs.

DATA ANALYSES

Since much of the survey data were non-normally distributed, ordinally scaled, and required ranking, nonparametric tests were deemed the most appropriate means for analyzing the data (Gaither and Glorfeld, 1985). Accordingly, Friedman one-way analysis of variance was used to test the omnibus null hypotheses that k samples have the same median, the Kruskal-Wallis analysis of variance by ranks was used to test for differences among the ranks of the samples, the Wilcoxon-Mann-Whitney test was used to test the omnibus null hypotheses that k samples with subgroups have the same median, and the Wilcoxon signed ranks test was used to confirm rank ordering (Siegel and Castellan, 1988).

RESULTS

A Cronbach alpha (α) was computed for each section of the survey. The *source, familiarity, and usefulness* sections yielded α 's of .82, .65, and .82, respectively. Thus, the three scales were deemed reliable instruments (Crocker and Algina, 1986).

Results are presented in the order of the three basic research questions: What is the primary source of management concepts for practicing managers? Are practicing managers familiar with key concepts and frameworks generated in the academy? How useful are key academic concepts and frameworks to practicing managers in their decision-making processes?

SOURCE

In an effort to determine whether significant response differences existed among the four *source* constructs, the non-parametric Friedman analysis of variance test was conducted. The Friedman test ranked the *source* frequency of responses and indicated that differences existed among the means ($\chi^2 = 161.00, p < .01$). A Wilcoxon signed ranks test confirmed this ordering. The test statistics are presented in Table 1. Results show the order of importance from highest to lowest as *sources* of knowledge for practicing managers is *experience, association, involvement and direct education*.

Additional tests were conducted to determine whether knowledge *source* influenced respondents' ratings of *familiarity and usefulness*. Results of a Kruskal-Wallis one-way analysis of variance by ranks test are shown in Table 2. Respondents who learn through *involvement* showed higher than average

Table 1. Wilcoxon Signed Rank Test by *Source*

Contrast	Z	Asymptotic Significance (2-tail)
Experience > Association	6.93	<.01
Association > Involvement	3.57	<.01
Involvement > Education	5.14	<.01

familiarity rankings, while those who learn through *association* showed somewhat lower *familiarity* scores. Further, respondents who learn through *experience* found somewhat less utility in the nine constructs of interest than the other respondents. Limited sample sizes precluded comparisons on *direct education*.¹ However, Kruskal-Wallis test for *source* differences between top-level and middle-level managers showed that top-level managers acquire academic concepts principally through *experience* ($\chi^2 = 9.90$, $p < .01$), and middle managers acquire academic concepts primarily through *involvement* ($\chi^2 = 11.47$, $p <$

.001). Other group contrasts were not significant.

FAMILIARITY

Due to the exploratory nature of this study, there were no established benchmarks for values to suggest whether *familiarity* scores were relatively high or low. Accordingly, it is reasonable to suggest that sentiment neutrality would be represented by an item score of 3 (since the items were scored on a five-point Likert scale), and the null hypothesis was set such that the average item mean must be equal to 3.0 (see Giunipero *et al.*,

Table 2. *Familiarity and Usefulness Scores by Source*

		Association	Education	Experience	Involvement
Familiarity	N	28.00	3.00	108.00	23.00
	Mean	3.72	3.76	3.78	3.84
	χ^2	27.00	2.00	21.32	22.00
	df	16.00	2.00	33.00	14.00
Usefulness	Significance	.02	.37	.94	.04
	Mean	5.03	5.54	4.86	4.95
	χ^2	27.00	2.00	105.00	21.00
	df	23.00	2.00	49.00	14.00
	Significance	.26	.37	.00	.09

¹ Since only 3 respondents reported knowledge acquisition from direct education, no meaningful comparative statistical analysis could be performed. However, it is worth noting that respondents reporting concept acquisition through direct education scored about the same on the familiarity scale (3.76)

Table 3. Familiarity T-test

Item	Item mean ($H_A: x > 3$)	t-statistic
Average of Familiarity items	3.74	30.525***

*** $p < .001$, two-tailed

Table 4. Familiarity and Usefulness by Construct

Item	Familiarity Rank*	Usefulness Rank*
Knowledge transfer/information flows	1	1
Inter-organizational relationships	2	2
Resource-based views	3	3
Supply-chain management	4	7
Globalization issues	5	8
Agency/opportunism	6	5
Environmental issues	7	9
Formal business planning	8	6
Dominant logic/product relatedness	9	4

*Asymptotic significance (two-tailed), $p < .001$

1999). The results of the t-test are shown in Table 3. The average familiarity item mean was 3.74 ($t=30.53$, $p < .001$), which suggests that respondents were relatively familiar with the concepts in this study.

However, to determine whether differences in *familiarity* existed among the nine academic constructs the Friedman test was conducted. Results shown in Table 4 indicate significant *familiarity* differences ($\chi^2 = 141.80$, $p < .000$) and rank order. In addition, the Wilcoxon-Mann-Whitney test was used to check for differences in *familiarity* scores between top and middle-level management. Middle-level managers ranked higher on *familiarity* with the nine academic

concepts ($Z = 2.16$, $p < .05$) than top-level managers.

USEFULNESS

Similar to *familiarity*, there were no established benchmarks for values to suggest whether *usefulness* scores were relatively high or low. Given the exploratory nature of this study, sentiment neutrality would be represented by item score's of 4 (since these items were scored on a seven-point Likert scale), and the null hypothesis was set such that the average item mean must be equal to 4.0. The results of the t-test are shown in Table 5. The average usefulness item mean was 4.95 ($t = 16.86$, $p < .001$), which suggests

Table 5. Concept Usefulness T-test

Item	Item mean ($H_A: x > 4$)	t-statistic
Average of Usefulness items	4.95	16.86***

*** $p < .001$, two-tailed

that respondents found relative utility in the concepts in this study.

The Friedman test results presented in Table 3 show differences in *usefulness* ratings among the nine academic constructs ($\chi^2 = 248.97$, $p < .001$) in rank order. In addition, the Wilcoxon-Mann-Whitney test was used to check for differences in *usefulness* scores between top-level and middle-level management. Middle-level managers ranked higher on *usefulness* with the nine academic concepts ($Z = 2.72$, $p < .01$) than top-level managers.

DISCUSSION AND CONCLUSIONS

In general, results suggest that the primary source of management concepts for practicing managers is *experience*, followed by *association* and *involvement*. The least identified knowledge source for practicing managers was *direct education*. While the transfer of academic concepts and knowledge are not accomplished solely through *direct education* (identified in this study as personal college education and personal contact in academia), study results do not provide any comfort or particular encouragement that "we really matter." Not surprising, only respondents recently enrolled in college courses identified *direct education* ($\chi^2 = 3.66$, $p < .10$)²

as the primary source of major management concepts. Usually, these respondents occupy lower levels in organizations and do not have high levels of influence in major strategic decisions.

Practicing managers appear to be familiar with the nine academic constructs presented in the survey, albeit to varying degrees. This result is not surprising given that the relevance of some academic constructs might depend on respondents' position in the organization. Perhaps, the most surprising finding in the *familiarity* ordering is the low ranking of formal business planning. However, on further reflection this result is consistent with the position of the fall of formal strategic planning (Mintzberg, 1994). Another finding of note is that middle-level managers were more familiar with the nine constructs than top-level managers. This is consistent with our findings that middle-level managers attended college courses and on-premise workshops more recently than top-level managers.

Study findings suggest that the nine academic constructs in this study are useful to practicing managers. The first three ordered constructs (knowledge creation and information flows, inter-organizational relationships, and resource-based views) occupied the same position on the

² This result was obtained during a *post-hoc* analysis, comparing respondents who indicated they'd attended college in the past 24 months versus those who had not.

usefulness dimension as on the *familiarity* dimension. Recent education seems to affect practicing managers' perception of construct *usefulness*. For example, middle managers that either recently took a college course or attended an on-premise workshop found more *usefulness* in the nine constructs than those that did not.

It is worth repeating that our respondents were relatively familiar with, and found utility in, our academically-generated business concepts. However, the results suggest that the transfer of the relevant strategic management concepts were intra-organizationally acquired by practicing managers. That is, managers likely learned these concepts through their experience, involvement, and association with their organizations.

IMPLICATIONS FOR ORGANIZATIONAL LEARNING

This is the heart of organizational knowledge creation (organizational learning). Organizational learning suggests that knowledge is created by an individual's continuous interplay between tacit and explicit knowledge (Nonaka, 1994). An individual's knowledge gained from **experience** becomes tacit and, over time it becomes explicit. Once an individual's knowledge becomes explicit, organizations (i.e., its actors) enable articulation and amplification of that new knowledge (Nonaka, 1994). The enabling process (i.e., the transfer of intra-organizational knowledge) likely occurs in the **association** and the **involvement** processes. Organizations learn due to the "acquisition of new knowledge by actors who are able and willing to apply that knowledge in making decisions or influencing oth-

ers in the organization" (Miller, 1996: 486).

The results suggest that organizational knowledge creation and learning is the process through which managers acquire academic business concepts. For example, managers acquired most (72.9%) of the business concepts through **experience** (49.6%) and **association** (23.2%). Personal experience is believed to be the genesis of organizational learning (Nonaka, 1994). Further, intra-company organizational knowledge is believed to be perpetuated by other organizational members (Huber, 1991; Miller, 1996). Other organization members are a source of organizational knowledge transfer and this explains why **association** was found to be a significant source of knowledge acquisition. Additionally, we found that **involvement** was the third largest source (20.4%) of business concept acquisition. Much (56%) of this source was attributed to "existing company protocol" and "staff meetings." Therefore, a large component of **involvement** is attributable to interactions with other organization members. Interpersonal interactions are also theorized to play a role in enabling organizational learning (Nonaka, 1994).

Another major finding is that the second greatest source (23.2%) of academic knowledge comes through **association**. The greatest form of knowledge acquisition through **association** is "business peers inside your company" (65.5%), followed by "business peers outside your company" (27.6%), "new college graduates" (4.3%), and "friends" (2.5%). Since the preponderance of knowledge acquisition came from intra-organizational business peers, the findings again support

the organizational learning tenet posted above.

The third greatest source (20.4%) of knowledge acquisition came from **involvement**. The forms of involvement were reported as "staff meetings" (32.3%), "outside consultants from academia" (28.5%), "existing company protocol" (23.7%), and "outside consultants not from academia" (15.5%). With the exception of academic consultants, these findings also suggest that knowledge generation and transfer exist through organizational learning. The least source (6.6%) of strategic management concepts were acquired from **education**. This finding is not surprising, *ex-post*, due to the respondents' time away from academic contact.

A key question is why isn't academic research being transferred to the practicing manager? One reason for the lack of knowledge transfer might be that practicing managers spend very little time reading those practitioner journals which are written by academics. Four items on the survey asked respondents how often they read the *Harvard Business Review*, *Sloan Management Review*, *California Management Review*, and *Academy of Management Executive*. The items "I read . . ." were rated on a five-point Likert scale from never (1) to always (5). All journals were read significantly less than the mean ("sometimes") at the $p < .001$ level.

Beyond the scope of these four journals would be familiarity with other journal articles, books, and seminars given by key researchers in the field. The respondents were asked to indicate whether or not they were familiar with some of academia's most prolific authors whose concepts were used in this study. While 42% of the respondents were familiar with

Tom Peters, between 76% and 80% of the respondents were not familiar with Jay Barney, Richard Rumelt, Kathleen Eisenhardt, Oliver Williamson, Michael Hitt, Ikjiro Nonaka, and Kiniche Ohmae.

Another reason for the lack of the transfer of academic concepts to managers is that management, unlike many other professions, do not require continuing education units (CEUs). It is expected that CEU-requiring disciplines (e.g., accounting) would be far more efficient at acquiring relevant academic knowledge. In this study there was a positive correlation between "hours spent in workshops in the last 24 months" and construct familiarity ($r = .404, p < .001$).

Therefore, future research should explore the nature and extent of knowledge transfers in other managerial disciplines (e.g., accounting, finance) which require continuing education units (CEUs). It is reasonable to expect (as we found) that managers seeking continuing education through readings, workshops, or seminars would gain greater knowledge of current academic concepts.

LIMITATIONS AND FUTURE RESEARCH

Our study was exploratory, and thus has the normal limitations and *caveats* inherent in such an undertaking. Therefore, the findings from this study are, at best, tentative. Our intent is simply to raise some important questions regarding the transfer of knowledge from academia to practitioners. Our hope is that this article serves as an impetus for future research in this area.

Accordingly, we note several limitations of the current study. For example, results may be affected be-

cause respondents may not be able to accurately identify their exact source of an academic concept. Another limitation is the low (11%) response rate in the current study. Although the sample size (N=175) was large enough to provide some degree of confidence in the findings, we can neither claim that the sample was representative of the target population nor that the findings are generalizable to managers *en masse*. Further, the findings from this study cannot be generalizable to other business disciplines such as organizational behavior. Accordingly, one extension of this study would be to replicate the survey using current topics in other management disciplines.

Results may be also be impacted by the measures used in the study. There was no known preceding empirical work to assist us. We measured construct acquisition source, familiarity, and utility using five- and seven-point Likert scales on items deemed to tap the constructs of interest. While construct acquisition source and utility of each item was clear to our subjects, construct familiarity ratings may have been biased. For example, some items (e.g., "My company has (or needs) a person to seek and manage new knowledge and/or technology") may have a common-sense element to them. Therefore, the respondent's degree of construct familiarity might have reflected some degree of agreement (i.e., a positive bias) due to the common-sense nature of the item. However, respondents unfamiliar with a given construct represented by an item may have found the item to be counter-intuitive. In this case, respondents' ratings would possess a negative bias. In short, some bias may

have occurred with some familiarity items, but it is impossible to assess the overall effect of the bias, if any.

Additionally, we recognize the shortcomings inherent in collecting, analyzing, and interpreting survey data. Therefore, the modest efforts in this area of research should be considered a small beginning upon which a stronger foundation may be built.

There are several ways this line of inquiry can be extended. One example would be to use other academically-generated business concepts such as those from the organizational behavior and human resources fields. Future research should explore the nature and extent of knowledge transfers in other managerial disciplines (e.g., accounting, finance), which require continuing education units (CEUs). CEU-requiring disciplines are likely more efficient in acquiring relevant academic knowledge. If true, then it would be reasonable to expect that managers seeking continuing education would gain greater knowledge of current academic concepts. Improvements to the current study would also be helpful. For example, an increase in the sample size and use of other sampling techniques could enhance the generalizability of findings. Nonetheless, strong theoretical justification has been provided for the model used in this study. Others are encouraged to develop alternative measures and designs to evaluate the effectiveness of the model so that we as academics may better understand how to become a greater source of knowledge for one of our major constituencies, practicing managers. Only then "we can truly matter."

APPENDIX A. Strategic Management Concepts, Premises, and Citations

Concept	Premise	Key Citation(s)
Knowledge transfer/ information flows	Creating and managing information flows enhances performance.	Nonaka, 1994; Cohen and Levinthal, 1990
Inter-organizational relationships	Intra-organizational relationships are vital to company success.	Oliver, 1990; Das and Teng, 1998
Resource-based views	Firms must possess resources which are rare, valuable, and unimitatable in order to achieve competitive advantage.	Penrose, 1959; Wernerfelt, 1984; Barney, 1991
Supply-chain management	Effective management of the supply chain can lead to competitive advantage.	Porter, 1987
Globalization issues	All firms are affected by global competition.	Ohmae, 1991; Ghoshal and Bartlett, 1990
Agency/opportunism	Opportunistic behavior must be monitored by the principals of an organization.	Eisenhardt, 1989; Williamson, 1975
Environmental issues	"Green" firms will outperform firms which are not.	Hart, 1995
Formal business planning	Formal strategic business planning enhances company performance.	Schendel and Hofer, 1979
Dominant logic/product relatedness	Organization performance can be enhanced by focusing on product lines which are similar.	Grant, 1988; Prahalad and Bettis, 1986

APPENDIX B. Fitting 12 Sources of Knowledge into 4 Constructs.

Below are the authors' 12 espoused sources of academic knowledge acquisition and the authors' assessments of how knowledge is transferred to managers (i.e. the assigned construct).

Source	Construct
Personal readings	Experience
Personal experience	Experience
Business peers inside your company	Association
Business peers outside your company	Association
Friends	Association
New college graduates	Association
Personal college education	Education
Outside consultants from academia	Involvement
Outside consultants not from academia	Involvement
Existing company protocol	Involvement
Staff meetings (with other departments)	Involvement
Personal contacts in academia (e.g., a professor)	Education

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