STRATEGIC MANAGEMENT KNOWLEDGE TRANSFER TO PRACTITIONER MANAGERS

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Abstract

The purpose of this study was to explore the sources of strategic management knowledge for practitioner managers, how familiar are they to strategic management concepts, and how useful these concepts are using three dimensional knowledge transfers model (3DKTM). To meet the purpose, structured questionnaire was distributed to 91 managers and administrators in Tigray Region on May 2005, Ethiopia; Non parametric inferential statistics was employed to test the hypotheses developed. Results suggested that the primary source of management concepts for practicing managers is experience, followed by academic institutions and association. The least identified knowledge source was involvement. It was also found out that practitioner managers appear to be familiar with the ten key-management concepts. The most surprising finding is presence of no significant differences on familiarity with the ten academic concepts between top and middle-level managers.

Key Words:
Ethiopia, Experience, Familiarity, Knowledge transfer, Strategic Management, 3DKTM
I. Introduction

Higher education institutions (HEIs) are in the knowledge business, since they are involved in knowledge creation, dissemination and learning. Knowledge transfer is a prime objective of both HEIs and research institutions, and all work hard to establish research links with companies in all fields of manufacturing and commerce. Industry, too, has realised that there is more to a university than a source of fresh graduates. Higher education has the research knowledge and resources a firm needs to compete effectively.

The distribution of knowledge in society has long been a focus of academic attention. Cultural and anthropological studies demonstrate that the transfer of knowledge across societies is not a recent phenomenon but an ever-present one. In earlier societies, religious missionaries and mercenaries were key agents of the diffusion of religious and military knowledge respectively. Over the last few years there has been an increasing academic attention being given to the role of management gurus, consultants, managers and academic researchers in the international diffusion of Western management ideas.

In Africa, as in most other developing countries, the transfer of management practices from the developed countries has been seen as the only viable option, in the absence of proven local initiatives (Raadschelders, 2000; Senaratne et al., 2004). Hence, even though there have been debates about the applicability of Western management practices in non-Western contexts, most public and private sector organizations in African countries have made efforts to implement these Western management concepts. Relatively little attention has been paid to the mechanisms through which diffusion takes place and, in particular, the role of academics as lecturers and business schools as disseminators of management knowledge. Also, there have been a number of calls for an assessment of the relevance of academic thought to management practice (Daniels, 1991; Hambrick, 1994; Mowday, 1997).

Regarding the influence of academic community on the management practice of business organisations, our literature review revealed only one such previous study which examined the influence of academic community on the management practices of business organizations in the United States. While important in its own right, the findings of this earlier work cannot be generalizable to managers en masse. Therefore, we wanted the present research to examine the influence of academic institutions on the management practice of business organizations in Ethiopia and in particular Tigray region. Accordingly, the present study is an extension to the earlier study by replicating the survey using current topics taught in graduate and undergraduate programs of management disciplines throughout Ethiopia. But we should not dither to tell that the present study is inspired of this earlier work and draws on heavily from it.

The main objective of the study is to examine whether the work of the academic community (read as western management ideas) has significantly influenced the management practice of business organizations in Ethiopia. To enable this, three basic questions are researched and answered:

- What is the primary source of strategic management concepts for practicing managers?
- Are practicing managers familiar with key concepts generated in the academic discipline of management?
- How useful are several key academic concepts to practicing managers in their decision-making processes?
In section two, we review relevant literature on knowledge management and the recent developments in the theory of knowledge then the section outlines management knowledge diffusion across continents or nations. The latter part of the section briefly reviews knowledge transfer under different settings and finally discusses the three dimensional knowledge transfer model originally developed by Paul G. Simmonds, et al*, from which propositions are developed. This section also provides the taxonomy of knowledge. Section three, describes the research methodology and discusses how the survey instrument was developed, pretested, and distributed. Section four, reports the results from the survey which examined the influence of academic community on the management practice of business organizations in Ethiopia and in particular Tigray region. The last section concludes the research study and presents policy implications for effective knowledge transfer which is a prime objective of higher education institutions.

II. Literature Review & Hypothesis Development

2.1 What is Knowledge?

Knowledge is an elusive concept that has been classified and defined in a variety of ways. Knowledge is broader, deeper, and richer than data or information. Data reflect discrete, objective facts about events in our world, while information is organized around a body of data. Davenport and Prusak (1998) define knowledge as a fluid mix of framed experience, important values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. Knowledge originates from unique experiences and organizational learning by key constituents, and it often remains embedded, not only in written documents but also in routines, tasks, processes, practices, norms, and values of organizations. Just as information is derived from data, knowledge is derived from information by contextualizing the information and comparing it with an existing standard and by examining the consequences a given body of information may have for immediate and long term organizational actions and decisions (Nonaka and Takeuchi, 1995; Chua, 2002; Scott, 2006).

Recent Developments in the Theory of Knowledge

In recent years major reviews have occurred of the nature of truth and knowledge, the relationship between rationality and action, and the links between individual thought and collective beliefs. Contributions have been made from a variety of sources, including the sociology of knowledge, discourse analysis, organization behavior, studies of the social impact of advanced technologies, theories of learning, institutional theory, and philosophy. Lockett et al (2011) tried to assess the multiple perspectives of knowledge transfer who identified four overarching themes in their study: (1) motivation and reward mechanisms; (2) process management and evaluation; (3) clustering and brokerage; and (4) bridge building and trust.

Using Ryle's (1949) terminology, collectively such work has contributed to a series of developments in both the theory of 'knowing that' and the theory of 'knowing how'. It has been suggested that knowledge is socially constructed, often tacit, a function of the play of

* For their study which examined the influence of academic community on the management practice of business organizations in the United States.
other meanings, enacted, distributed, situated, material, as well as mental and social, resilient, but provisional and developing, public and rhetorical, and acquired through participation within communities of practice (Lave and Wenger, 1991).

Such approaches variously emphasize the complexity of tacit skills and the significance of 'doing' as well as of 'deciding', the importance of culturally provided categories for individual thought, the social processes through which concepts and actions are negotiated, and the creative ways in which people use even the most abstract plans and representations. The full implications of such points remain to be fully worked out and different writers emphasize different aspects of them. Nonetheless, overall, the implications are clear: the conventional rational-cognitive approach to understanding is breaking down.

This is a highly significant development in a culture where abstract, rational, and analytic thinking has been highly prized. People, it has been commonly assumed, possess objective knowledge and can be expected to act in accordance with their considered judgements. Thought is a personal matter which takes place within individuals' heads; decisions on complicated issues will be well thought through and logical; plans are central to purposive action. Compare this to an approach which blurs the distinctions between the psychological and social, between thought and action and between theory and practice, and which emphasizes the limits of articulation, the cultural basis of knowledge, its indeterminacy, and the active nature of the processes through which knowledge is managed (Arbaugh, 2004).

**Taxonomy of Knowledge**

Scholars have classified organizational knowledge across many dimensions. One common dimension to classify organisational knowledge is to dichotomise it into private and public knowledge (Matusik and Hill, 1998). Private knowledge refers to the knowledge uniquely possessed by the organisation. It represents a resource that is valuable, rare, and imperfectly imitable (Barney, 1991). Examples of private knowledge include the organisation's unique practices, processes, documentation, or business strategies.

Public knowledge consists of knowledge not proprietary to any particular organisation. It resides in the public domain. This knowledge includes industry and occupational best practices. Total quality management, design for manufacturing, just-in-time inventory, lean manufacturing, and team-based incentives are all examples of best practices currently in the public domain, although at one point in time, many of these best practices were actually private knowledge. Nevertheless, public knowledge cannot be a source for an organization to maintain competitive advantage since it is not unique or proprietary to any organisation.

Private knowledge can be further classified along the component-architecture dimension (Matusik and Hill, 1998). Component knowledge is the knowledge that relates to a subroutine or discrete aspect of an organisation's operation. These components found in an organisation are the resources, knowledge, skills, and technical systems (Amit & Schoemaker, 1993; Henderson & Cockburn, 1994). For instance, the knowledge underpinning an organisation's new product development process, marketing strategies and inventory management control represents component knowledge. Each of these processes constitutes just one aspect of an organisation's overall knowledge structure.
Architectural knowledge differs from component knowledge in that it relates to organisation-wide routines and schema for coordinating the various components of the organisation (Henderson and Clark, 1990). Matusik and Hill (1998) found that there is often no one individual who is in a position to see, comprehend, and articulate the totality of architectural knowledge. Due to its unique nature and development, no two organisations share the same architectural knowledge.

Component knowledge as mentioned above, can be classified into individual knowledge and collective knowledge (Matusik and Hill, 1998). Individual knowledge refers to the knowledge harboured by an individual in an organisation. For example, in the course of work, a legal assistant in a law firm handles a unique legal proceeding not attempted by anyone in the organisation. As a result, the knowledge gained by that legal assistant becomes individual knowledge. If this knowledge is not shared with other members of the organisation, the organisation can neither multiply nor leverage on the value of this expertise (Davenport and Prusak, 1998). When that legal assistant leaves the organisation, the knowledge is lost permanently. However, if the individual knowledge is shared, it becomes collective knowledge. Collective knowledge is therefore the knowledge held commonly by a group of organization members. This includes organising principles, routines, practices, and relative organisational consensus on past experiences, goals and missions (Zander and Kogut, 1995). Hence, by definition, architectural knowledge is one form of collective knowledge, but not individual knowledge.

Collective knowledge is more secure and has more strategic significance than individual knowledge (Spender, 1996). By comparison, it is less volatile and less easily affected by staff turnover. Hence, the transformation of individual knowledge into collective knowledge has attracted much research interest among knowledge scholars (for example, Fahey and Prusak, 1998).

Some researchers (Gowler and Legge, 1982) questioned whether there is any real difference between collective knowledge and the aggregation of individual knowledge. The view of Simon (1991) occupies one end of the continuum. He maintained that the organisation per se does not hold any knowledge; only its members do. Hence, the collective knowledge is actually the aggregate of the individuals' knowledge in an organisation. At the other end of the continuum, Nelson and Winter (1982) asserted that collective knowledge is an attribute of the organisation just like its modus operandi and culture. Collective knowledge is therefore not reducible to what any single individual knows, or even to any simple, aggregation of the various competencies and capabilities of all the individuals. Sharing a similar view, Brown and Duguid (1991) maintained that shared knowledge is located in complex, collaborative social practices. Weick and Roberts (1993) also provided evidence to demonstrate that collective knowledge resides at the organizational level. This article therefore acknowledges the reasoning that collective knowledge is conceived to be socially and contextually embedded in an organisation and not a simple aggregation of knowledge held by a set of individuals.

The most fundamental and common classification of organizational knowledge is along the explicit–tacit dimension (Brown and Duguid, 1991; Nonaka and Takeuchi, 1995). In this classification, explicit knowledge is considered to be objective and can be expressed unambiguously in words, numbers and specifications. Hence, it can be transferred via formal and systematic methods in the form of official statements, rules and procedures (Nonaka and
Takeuchi, 1995; Polanyi, 1966). For example, the steps needed to start up a computer server and sending an E-mail involve explicit knowledge.

Unlike explicit knowledge which is structured and independent of the knower, tacit knowledge is subjective, situational and intimately tied to the knower's experience (Kidd, 1998). Thus, it cannot be formalised, documented or communicated easily to others. Insights, intuition beliefs, personal skills and craft and using rule-of-thumb to solve a complex problem are examples of tacit knowledge. Since tacit knowledge is usually acquired unconsciously or semi-consciously (Leonard-Barton and Sensiper, 1998), one characteristic of tacit knowledge is that of effortlessness (Polanyi, 1966).

Two components of tacit knowledge (Nonaka and Konno, 1998) are the technical component, which encompasses the kind of informal personal skills or crafts often referred to as "know-how" and the mental component that consists of beliefs, ideals, values, schemata, and mental models that are deeply ingrained in us, and often taken for granted.

Kogut and Zander (1993) argued that knowledge is not strictly polarized between the explicit-tacit dichotomy, but it exists along a continuum of tacitness and explicitness. Building on the work of Rogers (1962) and Winter (1987), Kogut and Zander proposed that organisational knowledge be measured in terms of its degree of explicitness. The degree of explicitness can be measured by three sub-constructs, namely, codificability, teachability and complexity.

Codificability is the extent to which the knowledge can be articulated or represented in documents and words. This knowledge may be substantive, for example, in blueprints, or it may be procedural, for example, in a recipe for carrying out a task (Kogut and Zander, 1992). The more explicit the knowledge is, the greater is its codificability. Teachability is the ease by which the knowledge can be taught to another person. By definition, the more tacit the knowledge, the harder it is to teach it. Complexity refers to the number of critical and interacting elements of the knowledge needed to accomplish a given task. The more elements needed to complete a task, the greater is the complexity of the knowledge.

Spender (1996) suggested that a relationship can be established between the individual-collective dimension of knowledge and its explicit-tacit dimension to create a matrix comprising four types of organizational knowledge. The first type is individual explicit knowledge which represents the expertise and knowledge available to the individual in forms that can be easily taught or written down.

The second type is individual tacit knowledge which is the knowledge held by the individual in the forms of individual schemas, skills, habits, and abstract knowledge and cannot be easily articulated (Lyles and Schwenk, 1992).

The third type is collective explicit knowledge which is knowledge embedded in an organisation in forms that can be easily taught or written down. This type of knowledge manifests itself in standard operating procedures, documentation, information systems, and rules (Brown and Duguid, 1991).

Finally, the fourth type is collective tacit knowledge residing in organisational routines, culture and corporate mindset (Lyles and Schwenk, 1992; Nelson and Winter, 1982; Nonaka
and Takeuchi, 1995). Such knowledge usually remains relatively obscure from individual members but is accessible and sustained through their interaction (Spender, 1994).

Several researchers (Nahapiet and Ghoshal, 1998; Weick and Roberts, 1993) discovered that high-performing organisations are better in creating and managing the collective tacit knowledge than mediocre ones. They attributed the strategic importance of collective tacit knowledge to the fact that it represents the extent of knowledge being distributed and leveraged among organisation members and it cannot be easily replicated by rival organisations.

For the purposes of this study, we use the definition of knowledge used by Kogut and Zander that incorporates both the relatively tacit "know-how", defined as "the accumulated practical skill or expertise that allows one to do something smoothly and efficiently" [Kogut and Zander, 1992]; and, information or "know-what", which accommodates more articulable dimensions of knowledge. Cognitive psychology differentiates between "declarative knowledge" (facts or justified true belief) and "procedural knowledge" (scripts or "how-to" knowledge) (Paris et al., 1983).

Declarative knowledge is knowledge of facts and definitions, and is usually acquired through formal education or training courses. For example, in the context of using standard cost variance analysis for performance evaluation, declarative knowledge includes definitions of cost elements and formulae for calculating variances (Moriarity and Allen, 1991). Procedural knowledge involves knowing the appropriate rules and how and when to apply them. For example, if a purchasing manager generates a favourable price variance, then procedural knowledge would suggest investigating materials usage and labour efficiency variances.

Popular learning theories (for example, Anderson, 1983, 1987; Anzai and Simon, 1979) argue that the acquisition of procedural knowledge is a critical determinant of task performance. Moreover, it is argued that procedural knowledge can only be acquired through appropriate combinations of instruction and experience. General problem solving ability also has a direct effect on task performance for unstructured tasks (Libby and Tan, 1994), and an indirect effect through the acquisition of procedural knowledge (Bonner and Walker, 1994).

Based on Anderson's (1983) learning theory, it is possible to identify important distinctions between the ways in which declarative and procedural knowledge are acquired. Anderson notes that declarative knowledge can be acquired through instruction. On the other hand, both theory (Anderson, 1982, 1987) and empirical results (Schoenfeld and Herman, 1982; Anzai and Simon, 1979) indicate that procedural knowledge cannot be acquired from instruction without practice. Anderson (1982) suggests that information from the task is important in the acquisition of procedural knowledge as it is used by individuals to interpret, compile, and fine tune their declarative knowledge. As explained by Glaser and Bassok '...(T)he theory holds that effective and conditionalised knowledge of procedures can be acquired only through actual use of declarative knowledge in solving problems' (1989, p. 636). Accordingly, acquiring procedural knowledge is more likely to result from work experiences throughout one's professional career.

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.

2.2 Management Knowledge Diffusion across Continents or Nations

There is now a large and growing literature on different aspects of the diffusion and learning of management ideas and ('best') practices within and between organizations, sectors and nations. Although similar issues and arguments have been explored much earlier (e.g. Devinat, 1927), this growth can be linked to a number of inter-related developments such as: the increased profile and apparent popularity of prescriptive management communicators from the USA especially (e.g. writers, consultants); the continued demand for solutions to perceived crises in competitiveness, particularly in established or hitherto protected markets; increased neo-liberal ideological legitimation for management; globalization (e.g. IT); and theoretical shifts which have attached primacy to knowledge and cultural diversity (e.g. post-modernism; post-colonialism).

Debates on the cross-national diffusion of knowledge have long oscillated between divergence and convergence (e.g. Hirst and Thompson, 1992). The latter is reflected in the view of globalization as straightforward standardization or even Westernization of local practices and cultures (Bauman, 1998; Robertson, 1992). Perhaps as a reaction to the popular and simplistic nature of this view, emphasis on local distinctiveness and resilience ('embeddedness') is currently assuming a somewhat dominant position in organization theory (Sorge, 1991). Accordingly, attention is focused on obstacles to cross-national diffusion (Bierstecker, 1995; Boyer and Drache, 1996). However, overall, a range of both barriers and facilitators can be identified from authors working from different perspectives and at different levels of analysis (see Child and Rodrigues, 1996; Guillen, 1994; Ramsay 1996).

Smith and Meiksins (1995) seek to provide such an integrative model for comparative analysis which can explain pressures from both sides as well as why some societies (e.g. the USA and Japan) assume the role of 'standard makers' (p. 252). They eschew the convergence—divergence dualism and chart three sets of interrelated and dynamic forces – system (political economic, class, gender, sector), societal (institutional, cultural) and dominance (national economic hierarchy) effects. While each cannot be studied in isolation, our interest here is mostly on the latter set of 'forces' and on the depth of adoption and resistance. We explore how 'dominant' or 'best' practices are currently produced and consumed in education and how they travel across national boundaries.

The journey of management ideas and systems across continents or nations has never been unproblematic. Although not typically a focus in the diffusion literature, there is a long history in the field of management and organizations of actors resisting ideas - from Taylorism to service smiles - explicitly on the basis of their foreign or national origin. This has contributed to the barriers and time lag in diffusion. Littler (1982) notes how, despite being promoted as a universal ('scientific') practice, Taylorism was initially resisted by British managers and engineers, not simply on the grounds of being inappropriate for Britain, but because it was seen as American. Indeed, such stances may inform practitioners' accounts which give ostensibly more 'rational' objections to new practices (Cox and Cooper, 1985).

Similarly Kogut and Parkinson argue from the cases of 1920s France and Germany that diffusion is more likely where related practices are already being developed locally and that
these 'indigenous roots' are stressed by promoters at the expense of foreign origins (1993, p. 186). Smith and Meiksins (1995) argue that as Taylorism became increasingly accepted, it lost its national label.

With the passage of time, the competitive advantage of the methods and the creation of a layer of diffusion agents ... Taylorism lost its national status and entered textbooks as a universal practice. This was because it was not simply an American capitalist ideology -- a cultural contingent -- but a way of organising from a dominant state, hence one tied to capitalist advance, and by capitals with the power to internationalise, diffuse and impose their 'solutions' on other nations. (p. 260)

By contrast, in some cases the politicization of local identity may (re-)expose the national identity of practices. For example, Chanlat (1996) documents changes in management education in Quebec since the 1960s based in part on a conscious assertion of local identity and concomitant resistance to Anglo, then American, definitions of management knowledge. More generally the recent emergence and diffusion of post-colonialism, whereby multi-culturalism and difference are celebrated, may serve to reinforce local identities and sensitivities over neo-imperialism. Thus, concern about what appears as the individualistic and masculinity character of Western management ideas can inhibit their uncritical appropriation (Jacques, 1996). Academics themselves acknowledge that uncritical adoption is neither practical nor desirable. Kostera points to signs of resistance from students in Poland to management knowledge from the West and, with it, 'democracy' and calls for a more mutual learning process valuing both 'sides' (1995).

Others are more prescriptive still, promoting multi-culturalism and 'cultural competency' in management education as, paradoxically the new 'one best way'. In Australia for example, ethnic diversity is promoted as a 'strategic resource' for both their educational bodies and target business organizations overseas (Clegg et al., 1996, p. 199). In Malaysia, resistance to UK, US and Western practices is evident not simply on the basis of its former colonial status, but from a state-led effort to construct a unifying national and/or Asian' identity and culture to support economic growth and political stability among different ethnic groups. Under these circumstances then, current management ideas may not be 'neutralized' nationally as easily as it appears to have been the case with Taylorism.

Indeed, resistance to US ideas is typically juxtaposed with the lure of potential economic growth and symbolic status to be derived from the practices associated with successful nations. As we shall see, there remains a strong demand for, and faith in, Western, especially American management knowledge in Ethiopia. These 'dominance' effects cannot be separated from economic and institutional factors (Smith and Meiksins, 1995).

2.3 Knowledge Transfer under Different Settings

While knowledge transfer from academic environment to practicing managers has received very little explicit attention, there has been considerable attention devoted to the questions of knowledge transfer within a single company, knowledge transfer in alliances and joint ventures, and knowledge transfer between independent firms. Here we briefly review this literature and some of its main findings as a prelude to our research study.
Knowledge Transfer within the Firm

Research on intra-firm knowledge transfer has a long history emanating from studies on choice of international technology transfer mode [see e.g. Pavitt, 1971; Mansfield et al, 1979; Vernon and Davidson, 1979]. Close scrutiny reveals a focus on a relatively small number of variables. One line of research on the timing of transfer has shown a dramatic increase in transfer speed from product introduction to transfer of technology to subsidiaries [e.g. Mansfield and Romeo, 1980; Davidson, 1980; 1983]. Another line of research on transfer costs has generally found that experience is an important factor [e.g. Teece, 1976; 1977; Mansfield et al, 1979]. More recently, Zander [1991] and Szulanski [1996] have taken a broader approach to internal knowledge transfer. Zander [1991] found that the tacit-articulated dimension of knowledge had an important impact on the smoothness of transfer. In particular, he found that the transfer of tacit knowledge was more difficult to accomplish than the transfer of more articulated knowledge. Szulanski [1996] focused on the transfer of best practices within firms, and the difficulties experienced in the transfer process. His findings were consistent with Zander's. When analyzing factors causing difficulties in the knowledge transfer process, Szulanski found that the tacit-articulated dimension explained more variance than any other factors, such as motivation.

Knowledge Transfer in Alliances and Joint Ventures

Research into knowledge transfer through alliances and joint ventures is a relatively recent phenomenon. Kogut [1988] was the first to explicitly argue that joint ventures could be motivated by an organizational learning imperative. He proposed that a joint venture "...is used for the transfer of organizationally embedded knowledge which cannot be easily blueprinted or packaged thorough licensing or market transactions" [Kogut, 1988: 319]. At around the same time, Westney [1988], Hamel [1991], and Inkpen [1992] developed related perspectives on the ways in which learning can be achieved through alliances and joint ventures. Since then, there has been a proliferation of research into the knowledge transfer process across alliance and joint venture boundaries [e.g. Inkpen and Crossan, 1995; Doz, 1996; Mowery et al, 1996]. The common thread in the results of these studies is that the ability to re-evaluate and learn is key to success.

Knowledge Transfer between Independent Firms

The transfer of knowledge between independent firms has not received nearly as much attention as the modes of transfer discussed so far. Obviously managers would prefer that valuable knowledge not get transferred to other firms, but the reality is that the process does occur, through some combination of imitation, reverse engineering, movement of personnel and business intelligence. Mansfield [1985], for example, found that a decision to develop a major new product or process was known to competitors within 12-18 months. Levin et al [1987] studied the cost of imitation, and showed that "major innovations" incurred higher imitation costs than "typical innovations". Further, Zander [1991] found that the level of difficulty of an intra-firm knowledge transfer is not necessarily the mirror image of the level of difficulty of its imitation.
2.4 A Three Dimensional Knowledge Transfer Model

We now discuss the model, as stated earlier, which was originally developed to examine the influence of academic community on the management practice of business organizations in the United States.

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, association, experience, and direct education.

**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. 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).

**Experience** results from knowledge gained through implicit learning and usually occur 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, and includes commonsense and personal knowledge. Choo (1998) argues that this type of knowledge is acquired over time and is unique to each individual.

**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. We extend the definition of direct education to include knowledge gained through formal classroom instructions or other direct access to formalized instructions.

Thus, our first hypothesis is to determine whether significant response differences existed among the four ways that knowledge is transferred. Formally:

**Hypothesis 1:** There is a positive response difference existing among the source constructs.

**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 Leventhal (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. Thus,

**Hypothesis 2(a): There is a positive relationship between practicing managers’ Familiarity and the Academic constructs.**

**Hypothesis 2(b): There is a positive difference in Familiarity constructs between top and middle-level management.**

**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. Thus,

**Hypothesis 3(a): There is a positive relationship between Academic constructs and Usefulness of these to practicing managers.**

**Hypothesis 3(b): There is a positive difference in Usefulness of Academic constructs between the top and middle-level management.**

**Materials and Methods**

The questionnaire approach was selected as the means to collect data for examination of the hypotheses. The questionnaires were administered on site especially during work hours and multiple respondents in a firm were selected randomly. This section describes how that instrument was developed, pretested, and distributed.
Instrument development and pre-test

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 course outlines of undergraduate and graduate management programs of various universities in Ethiopia. The content analysis identified fifteen major management concepts and after informally reviewed by the researchers, various faculty members, and graduate students reduced to ten key management concepts: (1) agency-principal relationships, (2) total quality management, (3) formal business planning, (4) change management, (5) business ethics, (6) supply-chain management, (7) attention to environmental issues, (8) globalization issues, (9) knowledge management, and (10) customer relationship management.

These ten concepts were repeated in each of three sections of the questionnaire. Seven ordinal categories were provided for respondents to identify knowledge sources. The seven potential sources of knowledge acquisition were clustered into the four categories of the study model (involvement, experience, association, and academic institutions). A five-point Likert scale was used to assess respondents' familiarity and usefulness with the ten concepts.

Distribution

One hundred and fifty questionnaires were distributed to organizations located in the major towns of the National State of Tigray Region representing a wide variety of industries. The number of potential respondents from each organization depended on the size, and number of functions in the organization. This selection process produced a usable sample of 93, yielding a response rate of 62 percent.

Some of the demographics of respondents include the following: 25.3% classified themselves as top managers and 74.7% as middle managers, 98.8% were male, 69.9% possessed a bachelors degree or higher and 6.4% possessed a masters degree or higher, 96.6% were between the ages of 25-55, and 72.5% had at least 11 years of work experience. From those responding institutions 74.7% were manufacturing, 12.1% were service rendering and the remaining 13.2% were others. Types of organizations were private sector (87.1%), public sector (11.8 %) and others (1.1%).

III. Analysis and Results

Data Analysis

Given the small sample and the nature of the rating system, we used nonparametric statistics, which are inferential tests designed for samples of ordinal measures or interval measures that are not normally distributed. They do not require that any assumptions be made about the distributions of the population from which the samples were taken and are therefore often referred to as distribution-free tests.

The Kolmogorov-Smirnov statistic test was conducted for each section of the survey to test the hypothesis that the data are normally distributed. The test statistics are appended (see Appendix-A) in Table-1.1; 1.2; 1.3, which reveals a low significance value (generally less
than 0.05) indicates that the distribution of the data differs significantly from a normal distribution.

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. 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.

Results

A Cronbach alpha (alpha) was computed for each section of the survey. The source, familiarity, and usefulness sections yielded alpha's of .6207, .8462, and .9224, respectively. Given the exploratory nature of our investigation, we were willing to accept a more relaxed criterion for reliabilities. Nunnally suggested the following rule of thumb: "In the early stages of research on predictor tests or hypothesized measures of a construct, one saves time and energy by working with instruments that have only modest reliability, for which purposes reliabilities of .60 or .50 will suffice" (1967: 227). More recently, Pedhazur and Schmelkin (1991) suggested that the issue of adequate reliability is not one to be resolved by an authority decreeing that a given reliability coefficient is adequate. Rather, it is for each user to determine the amount of error to be tolerated. Even given the small sample size, we were encouraged that the scales that emerged made sense, and we were comfortable working with them in an exploratory mode. Thus, the three scales were deemed reliable instruments. 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 generated in the academy? How useful are key academic concepts 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\(^2\) = 17.534, p .041). Multiple response analysis was conducted for the knowledge source construct. Results show the order of importance based on the percentage of responses from highest to lowest as sources of knowledge for practicing managers is experience (39.2%), academic institutions (27.0%), association (20.3%) and involvement (13.4%). Additional tests were conducted to determine whether knowledge source influenced respondents' ratings of familiarity and usefulness.

The table below show the results of a Kruskal-Wallis one-way analysis of variance by ranks test. Respondents who learn through experience showed higher than average familiarity rankings, while those who learn through involvement showed somewhat lower familiarity scores. However, the results of Kruskal-Wallis analysis of variance were not significant for usefulness rankings. Also, for source differences between top-level and middle-level managers were not significant.
Table 1: Kruskal Wallis Test

<table>
<thead>
<tr>
<th></th>
<th>Chi-square</th>
<th>df</th>
<th>Asymp.sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>familiarity</td>
<td>10.301</td>
<td>3</td>
<td>.016</td>
</tr>
<tr>
<td>usefulness</td>
<td>.491</td>
<td>3</td>
<td>.921</td>
</tr>
</tbody>
</table>

**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., 1999). The results of the t-test are shown in the following tables.

Table 2: T-Test: One-sample test

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Devia</th>
<th>Std.Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiarity</td>
<td>91</td>
<td>2.26</td>
<td>.69</td>
<td>7.22E-02</td>
</tr>
</tbody>
</table>

The average familiarity item mean was 2.26 (t = -10.26, p<.000), which suggests that respondents were relatively familiar with the concepts in this study. However, to determine whether differences in familiarity existed among the ten academic constructs the Friedman test was conducted.

Table 3: Test statistics: Friedman Test

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Chi-square</th>
<th>df</th>
<th>Asymp.sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>76</td>
<td>92.889</td>
<td>9</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

Results shown in table above indicate significant familiarity differences (chi² = 92.88, 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.

Table 4: Mann-Whitney Test statistics

<table>
<thead>
<tr>
<th>Familiarity</th>
<th>Mann-Whitney</th>
<th>Wilcoxon W</th>
<th>Z</th>
<th>Asymp.sig (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>473.00</td>
<td>704.000</td>
<td>-1.695</td>
<td>.090</td>
<td></td>
</tr>
</tbody>
</table>

Results shown in table above indicate no significant differences on familiarity with the ten academic concepts between top and middle-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 3 (since these 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. The results of the t-test are shown in table below.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Devia</th>
<th>Std.Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>usefullness</td>
<td>90</td>
<td>1.60</td>
<td>.71</td>
<td>7.48E-02</td>
</tr>
</tbody>
</table>

The average usefulness item mean was 1.60 (t = -18.67, p < .000), which suggests that respondents found relative utility in the concepts in this study.

The Friedman test results presented in Table below show differences in usefulness ratings among the ten academic constructs (chi\(^2\) = 119.82, p < .000) in rank order.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Chi-square</th>
<th>df</th>
<th>Asymp.sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>73</td>
<td>119.822</td>
<td>9</td>
<td>.000</td>
</tr>
</tbody>
</table>

In addition, the Wilcoxon-Mann-Whitney test was used to check for differences in usefulness scores between top-level and middle-level management.

<table>
<thead>
<tr>
<th>usefullness</th>
<th>Mann-Whitney</th>
<th>Wilcoxon W</th>
<th>Z</th>
<th>Asymp.sig (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>552.50</td>
<td>783.500</td>
<td>-.736</td>
<td>.462</td>
</tr>
</tbody>
</table>

Results shown in table above indicate no significant differences on usefulness with the ten academic concepts between top and middle-level managers.

### IV. Conclusions and Implications

In general, results suggest that the primary source of management concepts for practicing managers is experience, followed by academic institutions and association. The least identified knowledge source for practicing managers was involvement. While the transfer of academic concepts and knowledge are not accomplished solely through academic institutions, study results do provide a degree of comfort or an encouragement that the academic discipline of management shapes decisions of practicing managers.

The study also depicts that practicing managers appear to be familiar with the ten key-management concepts listed in the study, although 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 is that the hypothesis 2(b) is refuted through no significant differences on familiarity with the ten academic concepts between top and middle-level managers. However, on further reflection
this result is not surprising given that all the respondents in the study either recently took a college course (middle-level managers) or attended workshops (top-level managers) recently.

Study findings suggest that the ten academic constructs in this study are useful to practicing managers. The first two constructs (Agency-Principal Problem and Total Quality Management) occupied the same position on the usefulness dimension as on the familiarity dimension.

Based on the findings of this study, a key task for academics and managers is to maximize interactions in which they can discuss and pursue common interests. Academics need to convince practitioners that they can help in building both the knowledge base and the learning capacity of the organization. Practitioners need to be more reflexive about their own learning and the effects (potential and actual) of their existing knowledge base and mindsets.

The university administrators should take knowledge transfer as a priority issue and make serious efforts for disseminating knowledge in various fields to practitioners. The transfer of this knowledge can be tailored to the requirements of organisations. It can take the form of short term consultancy and testing services through to more substantial partnerships (lasting between one and three years) such as research collaboration and Knowledge Transfer Partnerships (KTP). This enables firms of all types to take advantage of the wide range of expertise available in the higher education knowledge base.

For the organizations to have capable and trained personnel they should conduct knowledge and skills need assessments on a regular basis. The current knowledge and skills of workers are measured and matched against the evolving business needs. This assessment would provide the management an idea about the deficiencies of personnel with regard to knowledge and skills. Once deficiencies have been identified the organization should seek the help of academic institution in covering those deficiencies.

The academic institutions should on a regular basis make changes to the curriculum to meet the changing needs of the practitioners through dialogue with the practitioners on a regular basis. Knowledge will be of less value unless it is applied; therefore academic institutions should produce personnel that can solve problems of the government and business organizations.

Reference


